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IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MONTANA  
MISSOULA DIVISION

11 COLUMBIA FALLS ALUMINUM COMPANY, LLC, ) Plaintiff,) No. CV 18-131-M-DWM  
12 vs. )  
13 ATLANTIC RICHFIELD COMPANY, ) Defendant.)  
14 )  
15

16 BEFORE THE HONORABLE DONALD W. MOLLOY  
17 UNITED STATES DISTRICT COURT JUDGE  
18 FOR THE DISTRICT OF MONTANA

19 Russell Smith United States Courthouse  
20 201 East Broadway  
21 Missoula, Montana 59802  
22 Wednesday, July 7, 2021  
23 08:35:00 to 17:04:59  
24

25 Proceedings recorded by machine shorthand  
Transcript produced by computer-assisted transcription

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1 PROCEEDINGS

2 (Open court.)

3 THE COURT: Good morning. Please be seated.

4 MR. LAUER: Good morning, Your Honor.

5 MR. RAUCHWAY: Good morning.

6 THE COURT: Before we get into the next witness, I  
7 have read the Hatch report, Exhibit 723, and I am not going to  
8 admit that into evidence.

9 So would the defendant please call your next  
10 witness?

11 MR. RAUCHWAY: Your Honor, the defendant calls John  
12 Lucas by deposition.

13 THE COURT: All right.

14 I knew you were here for some reason.

15 MR. COX: I get a speaking part today.

16 MR. RAUCHWAY: Do I need to tender the original to  
17 the Court, Your Honor?

18 THE COURT: So the witness -- there's a reader, and  
19 the witness has been sworn in at the deposition.

20 Is this the same procedure? You're going to read  
21 the entire part of the deposition, or is Mr. Lauer going to  
22 read parts of it?

23 MR. RAUCHWAY: I think we've agreed that I'll read  
24 the part that we took and that Mr. Lauer will read the cross  
25 piece at the end --

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 THE COURT: All right. You may proceed.

2 MR. RAUCHWAY: -- and Mr. Cox will read everything  
3 for the witness.

4 Okay. Beginning on page 12, line 20.

5 WHEREUPON,

6 MR. JOHN R. LUCAS, JR.,

7 called for examination by deposition by counsel for defendant,  
8 after having been previously sworn to testify the truth, the  
9 whole truth, and nothing but the truth, testified as follows:

10 DIRECT EXAMINATION

11 BY MR. RAUCHWAY:

12 Q "Good morning, Mr. Lucas. Would you please introduce  
13 yourself to the Court by stating your full name?

14 A "John Richard Lucas, Jr.

15 Q "Thank you.

16 "And where do you live, Mr. Lucas?

17 A "I live in Palos Verdes, California, which is south of  
18 the LA Airport.

19 Q "Thank you.

20 "And I understand you're an attorney, sir?

21 A "I am, yes. Not active anymore."

22 MR. RAUCHWAY: Moving to page 15, line 3.

23 Q "Okay. So why don't we begin by having you tell the  
24 Court a little bit about your professional background starting  
25 with law school.

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 A "I graduated from Yale Law School in 1970 and went to  
2 work as an associate with Gibson, Dunn & Crutcher in  
3 Los Angeles in the summer of 1970, where I -- after going  
4 through a rotation in the various departments of the law firm,  
5 litigation, I wound up doing litigation, mainly class actions  
6 under the then new Rule 23 of Federal Rules of Civil  
7 Procedure, and then later on fairly large antitrust cases.

8 "Of course I was quite junior so in those cases I was  
9 fairly junior in the -- in the case, although I did have some  
10 small antitrust cases that I argued on and appeared for.

11 "I was with Gibson, Dunn until June of 1976 and then I  
12 joined the legal department of the Atlantic Richfield Company  
13 to be a part of the major litigation group.

14 Q "Okay. And when you joined Atlantic Richfield in 1976  
15 was that also in Los Angeles?

16 A "Yes. In Los Angeles.

17 Q "Okay. And how long were you employed by Atlantic  
18 Richfield?

19 A "I was with Atlantic Richfield until approximately July  
20 of 2000, after we --

21 "The company was sold in a merger agreement with the BP,  
22 British Petroleum. And after the merger I was let go, as were  
23 most of the management group at -- at ARCO."

24 MR. RAUCHWAY: Moving to page 16, line 15.

25 Q "At some point after you began working for ARCO in June

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 of 1976 did you begin work on issues related to the Columbia  
2 Falls Aluminum site?

3 A "Yes, I did.

4 Q "And when did you start working on Columbia Falls issues?

5 A "I think at some point probably in the spring of 1986  
6 with respect to Columbia Falls. I did some work with Claude  
7 Goldsmith and I remember going back to the Louisville offices  
8 to work on some matters that had to do with other aspects of  
9 ARCO Aluminum but I think also involved some of the cleanup of  
10 the Acquisition Agreement with Columbia Falls.

11 "Claude Goldsmith was the treas- -- had been treasurer of  
12 ARCO, was -- you know, they were monitoring the settlement of  
13 receivables, short-term receivables, that type of cleanup work  
14 after the acquisition had gone forward the previous year."

15 MR. RAUCHWAY: Moving to page 19, line 1.

16 Q "Okay. Let's -- let's mark our first exhibit, which will  
17 be Exhibit 1.

18 "And this will be the Acquisition Agreement I think you  
19 already referred to. And the Bates Number for the reporter  
20 and opposing counsel is -- ARC-1930 is the first page."

21 MR. RAUCHWAY: Moving to line 19.

22 Q "Okay. And is Exhibit 1 the Acquisition Agreement you  
23 referenced in response to one of my questions a few moments  
24 ago?

25 A "Yes, it is.

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 Q "All right. And did you become generally familiar with  
2 the Acquisition Agreement in the course of your work on the  
3 Columbia Falls site after the spring of 1986 or so?

4 A "I became generally familiar with it. I -- I was not  
5 terribly familiar with every part or aspect of it, including  
6 human resources aspects and accounting issues and such.

7 Q "Okay. And I think you touched on this before but let me  
8 make sure -- make certain of this.

9 "You had no involvement in the negotiation of this  
10 agreement; is that correct?

11 A "That is correct.

12 Q "All right. Can you turn to page 32 of the Acquisition  
13 Agreement, the page that's Bates-stamped in the lower  
14 right-hand corner 1962?

15 A "Yes. I see that.

16 Q "All right. And you see there are some signatures there  
17 in about the middle of the page?

18 A "Yes.

19 Q "Okay. One of those is a Mr. B. W. Duker.

20 "Who was Mr. Duker?

21 A "Brack Duker had been a vice president of the Atlantic  
22 Richfield Company in corporate. I, frankly, am not exactly  
23 sure what his duties and responsibilities were.

24 "But he had left ARCO to head up the Montana Aluminum  
25 Investors Corporation group, which was I think largely Brack,

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 to buy the Columbia Falls smelter or to negotiate to buy the  
2 Columbia Falls smelter."

3 MR. RAUCHWAY: Moving to page 21, line 16.

4 Q "In the course of your work related to the Columbia Falls  
5 site, did you have occasion to correspond with Mr. Duker?"

6 A "Yes. From time to time over the period, yes. I -- I  
7 corresponded with Mr. Duker."

8 Q "Did you also have occasion to have telephone discussions  
9 with Mr. Duker?"

10 A "Yes, I did."

11 MR. RAUCHWAY: Moving to page 27, line 5.

12 Q "Mr. Duker, in the Acquisition Agreement, signs on behalf  
13 of Montana Aluminum Investors Corp., or MAIC, right?"

14 A "That's -- that is correct, yes."

15 Q "Did you become aware at some point that the Columbia  
16 Falls Aluminum Company assumed the rights and obligations of  
17 MAIC under the Acquisition Agreement?"

18 A "Yes. It was -- it was after this period where the  
19 original agreement was signed, several years later."

20 Q "Okay. So for ease of reference, I'm going to refer to  
21 'MAIC' and 'Columbia Falls Aluminum Company' just collectively  
22 as 'CFAC' unless there's a particular reason to distinguish  
23 the two in -- in my question."

24 "Is that acceptable to you?"

25 A "Yes, that will be fine."

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 Q "All right. Let's move to Exhibit -- what we'll mark as  
2 Exhibit 2 and that's a document entitled 'Supplemental  
3 Agreement.' It begins with the Bates Number ARC-2010.

4 "And do you have that document in front of you,  
5 Mr. Lucas?

6 A "I do.

7 Q "Okay. And have you seen this agreement before as well?

8 A "Yes, I have.

9 Q "All right. Now, looking at paragraph 1, it refers to an  
10 estimated amount of 4 million dollars that Atlantic Richfield  
11 was going to pay to MAIC or CFAC at the closing date of the  
12 Acquisition Agreement.

13 "Do you see that provision?

14 A "Yes, I do. It was -- it was to be deposited into an  
15 escrow fund for the benefit of then MAIC, now CFAC.

16 Q "Okay. And did you have a general understanding when you  
17 were working on Columbia Falls issues as to what that  
18 4 million dollars was for?

19 A "Yes, I did.

20 Q "Okay. Can you tell us what that understanding was?

21 A "Well, it was -- it was designed to provide funds to  
22 Brack Duker and his group, and the people that he was engaging  
23 at various levels. I have -- I don't know the details,  
24 obviously, of what Mr. Duker was doing with it. But it was to  
25 fund their operation as the new management on top of the

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 existing working group at the plant level to run Columbia  
2 Falls during this transitional period after they acquired it  
3 from ARCO.

4 Q "And looking at paragraph 4 of the agreement, generally  
5 speaking the agreement requires CFAC or MAIC to pay back that  
6 4 million dollars if they -- if the company reaches certain  
7 profitability levels.

8 "Is that generally accurate?

9 A "That would be my understanding, yes.

10 Q "Later on did you become aware of negotiations between  
11 Mr. Duker, on behalf of CFAC, and Atlantic Richfield Company  
12 to pay back that 4 million dollars?

13 A "Yes, there -- there were negotiations later on with  
14 respect to whether that money was then owed to be paid back.  
15 Yes.

16 Q "Okay. You can put Exhibit 2 aside.

17 "Let me ask you about environmental issues at the  
18 Columbia Falls site since that's why we're here today.

19 "Shortly after you were assigned to work on issues at the  
20 Columbia Falls site did you learn that Mr. Duker was making  
21 claims to ARCO about environmental issues at that site?

22 A "Yes, I did become aware.

23 Q "What did you learn? What was Mr. -- what types of  
24 claims was Mr. Duker making?

25 A "There -- there were a variety of -- of claims, including

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 a lot of environmental claims pertaining to the site,  
2 pertaining to the operation of the facility and its equipment;  
3 pertaining to the payment of severance pay, pensions, all of  
4 that having to do with HR and separating out the obligation of  
5 the prior employer with the new employer.

6 "There -- there were a series of -- of such issues,  
7 disputes, claims that he had -- had raised.

8 Q "Did you learn that Mr. Duker had raised claims  
9 concerning environmental issues with the landfills at the  
10 Columbia Falls site?

11 A "Yes. The land- -- the landfills were -- were one of  
12 them -- one of the types of -- of claims that were being  
13 asserted.

14 Q "How about claims with respect to spent potliner, or SPL,  
15 that had been disposed of at the site?

16 A "I certainly do remember potliners figuring prominently  
17 in the -- in the documents going back and forth.

18 Q "How about claims related to cyanide and fluoride in the  
19 groundwater, was Mr. Duker making environmental claims based  
20 on those issues?

21 A "Yes, he was.

22 Q "Shortly after you began working on Columbia  
23 Falls-related issues" --

24 MR. AMENT-STONE: (Standing.)

25 THE COURT: Just a sec.

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 Is there an objection?

2 MR. AMENT-STONE: Rule 408, Rule 403.

3 THE COURT: That's overruled.

4 BY MR. RAUCHWAY:

5 Q "Shortly after you began working on Columbia  
6 Falls-related issues, CFAC proposed to amend the Acquisition  
7 Agreement, didn't they?

8 A "Yes, they did.

9 Q "All right. Let's look at our next exhibit which is --  
10 begins with an August 12, 1986 letter addressed to you from a  
11 Mr. Thamistocles Michos.

12 "Do you have that in front of you?"

13 MR. AMENT-STONE: (Standing.)

14 THE COURT: Just a second.

15 What's the objection?

16 MR. AMENT-STONE: This exhibit again, 408, 403, not  
17 produced in discovery.

18 THE COURT: Well, let's hear what the question is.

19 Go ahead and proceed with the reading of the  
20 question.

21 BY MR. RAUCHWAY:

22 Q "Do you have that in front of you?"

23 A "I do."

24 MR. RAUCHWAY: Moving to line 18 on page 32.

25 Q "Okay. Let me ask you about first the numbered Section 3

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 of this proposed amendment and specifically where it says  
2 'ARCO hereby waives the August 31, 1990 deadline for Buyer's  
3 making of claims under Section 10(a)(iii) of the Agreement for  
4 all claims related to environmental hazards and occupational  
5 disease,' and then it goes on."

6 THE COURT: All right. The objection is overruled.

7 Go ahead. Read the answer.

8 Q "What was the significance of the August 31, 1990 date  
9 that CFAC was proposing that ARCO waive through this  
10 amendment?

11 A "The August 31, 1990 date was the termination date of the  
12 Indemnity Agreement that ARCO had given to Columbia Falls with  
13 respect to claims which related to a prior operation of  
14 Columbia Falls facility and the -- the business as set out in  
15 the Acquisition Agreement. And, you know --

16 "I'll stop there.

17 Q "Okay. So CFAC was proposing that ARCO waive that  
18 deadline such that it could be allowed to make claims related  
19 to environmental hazards, among other things, at the site  
20 after August 31st of 1990.

21 "That's what they were proposing, right?

22 A "That is correct, yes.

23 Q "And ARCO did not agree to this amendment, did it?

24 A "It did not agree to this, no.

25 Q "And ARCO didn't otherwise agree to waive the August 31,

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 1990 deadline, did it?

2 A "No, it -- it absolutely did not agree to waive the --  
3 the deadline.

4 Q "At the bottom of that same page in Section 5, it begins  
5 on that page and then continues onto the next one, under the  
6 heading 'Acknowledgment of Certain Environmental Claims.'

7 "Do you see where I'm referring to?

8 A "Yes, I do. I see that.

9 Q "Okay. And these enumerated claims that are referenced  
10 in this proposed amendment, were those the same types of  
11 environmental claims that Mr. Duker had been raising with  
12 Atlantic Richfield previously during your period of  
13 involvement?

14 A "From the context, that would -- that would appear to be  
15 the case because there had been a series of these claims made  
16 during the preceding year and a half, two years, by Columbia  
17 Falls. And that's presumably what they're trying to do is to  
18 get us to -- specifically as to those claims, in addition to  
19 the general waiver, to specifically state that those claims  
20 were acknowledged and accepted by us.

21 "I'm not sure that there were any schedules prepared for  
22 this draft. That may have just been -- it was a draft but  
23 then the schedules would have been plugged in later. But  
24 that -- that -- but that's an assumption that I'm -- I'm  
25 making.

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1           "But, yes, it seems to me clear that he's referring to  
2 all the claims in the various areas that Mr. Duker had been --  
3 and other people at Columbia Falls had been asserting to  
4 ARCO."

5           MR. RAUCHWAY: Moving to page 35, line 18.

6 Q        "Okay. Mr. Lucas, in Section 5(a), CFAC is proposing  
7 that it be allowed to make claims even if the 'nature, scope,  
8 and extent' of that claim was not known by the August 31, 1990  
9 deadline; is that correct?

10 A       "That's correct, yes. That's what it says.

11 Q       "All right. And CFAC also proposed through this  
12 amendment that it be allowed to make claims against ARCO, and  
13 that ARCO accept such claims, even if no actual claim had been  
14 made against CFAC before August 31st of 1990, right?

15 A       "Yes. I think that is -- I think it's -- I think the  
16 paragraph is a little confusing, frankly. But they're  
17 obviously trying to make it wide open, that anything can come  
18 in whenever and -- and be amplified whenever.

19 Q       "Okay. Well, let's look further on in -- in paragraph 6  
20 and maybe that will illuminate this. And then perhaps we  
21 should use an example.

22           "If this amendment had been agreed to by ARCO, then CFAC  
23 could make a claim against ARCO even if -- you know, if some  
24 federal agency came to it demanding remedial work years later,  
25 right?

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1           "That's what they were attempting to achieve through this  
2 amendment; is that right?

3 A       "That's what I understood they were -- were -- were  
4 seeking in this proposed amendment, yes.

5 Q       "And did ARCO agree at any time to allow CFAC to make  
6 that kind of claim?

7 A       "No, we did not. We -- we did not agree to this  
8 amendment. And I don't recall that there was very much  
9 discussion about it.

10          "It was just, you know, completely inconsistent with the  
11 fundamental nature of the agreement that we'd reached with  
12 MAIC over Columbia Falls and it just never went anywhere.

13 Q       "Were there specific discussions about that scenario,  
14 that particular scenario that I highlighted and that's  
15 discussed in paragraph 6, that if some governmental agency  
16 were to come to CFAC in the future and request that they  
17 perform environmental work or remedial work, that that would  
18 be a claim they could make against ARCO?

19 A       "Well, I'm -- I'm sure there were discussions. I -- I  
20 don't know to what extent there were discussions internally at  
21 ARCO and with CFAC and its representative, Mr. Michos.

22          "I'm sure it was -- with him, I probably, because I did  
23 speak with him, briefly discussed it. But I don't have any  
24 recollection of any extended discussions with anybody about  
25 it. It just was something that, you know, was not -- was not

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 going to be agreed to.

2 Q "Okay. Let's look at our next exhibit, which will be a  
3 January 29, 1988 letter from Brack Duker to James S. Morrison,  
4 Bates Number ARC-13231.

5 A "Can you repeat that?

6 Q "Sure.

7 "It's a January 29, 1988 letter from Brack Duker to  
8 James S. Morrison. And hopefully the Bates stamp is the same  
9 one I'm looking at, which is ARC-13231 on the first page.

10 A "Yes, I see that now.

11 Q "So I'd like to direct you to the third paragraph there  
12 where there's a reference to your name and Mr. Duker is  
13 writing that he agreed that you would be Atlantic Richfield's  
14 representative in dealings with MAIC.

15 "Do you see that reference?

16 A "I do, yes.

17 Q "And did it end up that you were, in fact, one of a small  
18 group of persons at ARCO who dealt directly with Brack Duker  
19 after the Acquisition Agreement was signed?

20 A "I believe that is -- is correct with respect to -- to  
21 Brack Duker. There may have been other people had dealings  
22 with other issues with people at -- at CFAC, probably mainly  
23 dealing with the human resources-type area, but I don't know  
24 that.

25 "But I certainly was the person that typically Duker

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 spoke with or contacted on this, at least that's my  
2 understanding. I wasn't aware that he was going to other  
3 people.

4 Q "And was it your understanding that Mr. Duker was a  
5 principal of MAIC and later CFAC?

6 A "My understanding he -- he was the major principal of  
7 MAIC and then CFAC.

8 Q "In the final paragraph there's a reference to Mr. Duker  
9 asking you to 'develop ARCO's position on the asbestos and pot  
10 bottom environmental problems.'

11 "Do you see that reference?

12 A "I do see that, yes.

13 Q "Okay. And were those some of the same environmental  
14 issues that Mr. Duker had been complaining about since you  
15 started working on the Columbia Falls site?

16 A "Well, they certainly had been issues that had been  
17 complained about for a substantial period; whether both of  
18 them got all the way back to the very beginning, I don't know.

19 "But, you know, from -- from the very beginning  
20 we had a bunch of environmental stuff and certainly the  
21 asbestos and pot bottom environmental problems were a major  
22 point that had been dealt with prior to this for some time."

23 MR. RAUCHWAY: Moving to page 41, line 4.

24 Q "Mr. Lucas, the next exhibit I'd like you to look at is  
25 dated January 4, 1987. It's a letter from Mr. Payne to

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1       Atlantic Richfield. And the first page has the Bates Number  
2       on it ARC-2062.

3       A        "I have that."

4                  MR. RAUCHWAY: Moving to line 24 on page 41.

5       Q        "Okay. First, the letter is dated 'January 4, 1987' but  
6       it has a 'Received' stamp on it with your name, 'January 3,  
7       1988.'

8                  "Do you see that? Or maybe it's 'January 8, 1988.'

9       A        "Yes, I see that. It looks like 'January 8.'

10      Q        "Yes.

11                "And if you look in the third paragraph of the letter it  
12       refers to a telephone call from EPA on December 15th of 1987.

13                "Do you see that reference?

14      A        "I do.

15      Q        "And so, you know, from those two clues in the document  
16       does that suggest to you that this letter may have been  
17       actually written on January 4th of 1988?

18      A        "I -- I -- I would think that would be the case, yes.

19      Q        "Now, the letter is written by a Mr. T. F. Payne.

20                "Do you remember who Mr. Payne is or was?

21      A        "Well, his title is 'Technical Manager' and he was up at  
22       the Columbia Falls. And I had various correspondence from him  
23       and with him during this -- this period.

24      Q        "Okay. Thank you."

25                  MR. RAUCHWAY: Moving to line 4, page 43.

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1 Q "Okay. This letter from Mr. Payne documents a -- a visit  
2 from EPA where Mr. Payne writes that they were primarily  
3 interested in past practices of ARCO rather than the current  
4 practices of Columbia Falls Aluminum.

5 "Is that an accurate description?

6 A "That's -- that's what he recites in the letter, yes."

7 MR. RAUCHWAY: Moving to page 44, line 12.

8 A "Yeah. He -- he -- I can just read it.

9 "'We will look to ARCO to indemnify MAIC and CFAC for any  
10 expenses from this matter which result from conditions in  
11 existence prior to September 10th,' and before I started  
12 reading it says 'Furthermore, per Section 10(a)' and (iii).'"

13 MR. RAUCHWAY: Moving to line 24.

14 Q "All right. So for --

15 "With respect to the section that Mr. Payne identifies in  
16 this letter, the Section 10(a)(iii) at least, CFAC took the  
17 position at this time that the parties' Indemnity Agreement  
18 extended to pre-1985 environmental liabilities; isn't that  
19 right?

20 A "That's correct. Yes. That's what they were asserting.

21 Pre-1980 -- '85, yeah, liabilities and conditions.

22 Q "And looking at the -- there's a list of CCs at the end  
23 of the paragraph -- at the end of the letter. I guess it says  
24 'mcs.'

25 "Do you see that list?

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1 A "Yes, I do.

2 Q "And the second name is 'J. Broussard.'

3 "Do you know who that is?

4 A "He was an executive, as I understood it, at MAIC who was  
5 working with Brack Duker. I'm not sure I ever met the man. I  
6 may understand that he was the guy running the technical side  
7 of the business as opposed to Brack who was out in I think  
8 Los Angeles most of the time where he lived and had his  
9 office.

10 "But it's Jerry Broussard. And beyond that, I really  
11 can't give you any more information."

12 MR. RAUCHWAY: Moving to page 46, line 4.

13 Q "Okay. Let's look at our next exhibit which we'll mark  
14 as Exhibit 6.

15 "It is an April 12, 1988 letter addressed, again, to  
16 Atlantic Richfield from Mr. Payne. And you'll see it also has  
17 a stamp -- your 'Received' stamp on it. And to make sure  
18 we're all looking at the same document, the first page is  
19 Bates-stamped ARC-2060.

20 "Do you have that letter, Mr. Lucas?

21 A "I do have it, yes.

22 Q "Okay. In this letter Mr. Lucas -- well, let me just ask  
23 you foundationally.

24 "Do you see your stamp on there that says 'J. R. Lucas'?

25 A "Yes, I do.

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1 Q "Okay. And does that indicate that this letter was  
2 received by you at or about the time it was received by  
3 Atlantic Richfield Company?

4 A "Yes, it does.

5 Q "All right. In Item 2 of the re: line on this letter  
6 there's a reference to 'Our letter to you dated January 4,  
7 1988.'

8 "Do you see that?

9 A "I do.

10 Q "Okay. And that's the same letter we just looked at a  
11 moment ago that we marked as Exhibit 5, right?

12 A "Yes.

13 Q "All right. And here in this letter Mr. Payne is  
14 providing notice to Atlantic Richfield Company concerning  
15 potential Superfund cleanup requirements at ARCO's former --  
16 former facility at Columbia Falls.

17 "Do you see that language in the letter?

18 A "Yes."

19 MR. RAUCHWAY: Moving to page 48, line 4.

20 Q "The other item in the re: line is the 'Acquisition  
21 Agreement,' right?

22 A "Yes.

23 Q "Did you understand this letter to be a -- a precursor  
24 for a claim to indemnification by Columbia -- by CFAC for the  
25 Superfund cleanup of the Columbia Falls site?

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1 A "I think I need you to --

2 "I said I think it sort of looks like a follow-up on the  
3 other letter that made that claim already. And this is just  
4 giving us notice under the notice provision that there was  
5 going to be this inspection. And inviting us to, I guess,  
6 participate in the inspection.

7 Q "Okay. Let's move on to our next exhibit which we'll  
8 mark as Exhibit 7.

9 "And this one is an April 18, 1988 letter, this time from  
10 a Mr. Ryan, and it's directed to Tom Harris at EPA.

11 "And the Bates Number on the first page of this document  
12 is ARC-3710.

13 A "Yes. I see that.

14 Q "Okay. Do you remember who Mr. Ryan is or was?

15 A "Well, again, I -- I think I understood him, based on his  
16 title, as -- you know, it says he was the 'Laboratory  
17 Superintendent.' I assumed he was somebody that was working  
18 in the -- in the group with Mr. Payne and -- and possibly  
19 others on, you know, that side of the business, including at  
20 least some of the environmental matters.

21 Q "Now, Mr. Ryan writes in this letter that he understood,  
22 at least, the purpose of EPA's visit to the Columbia Falls  
23 site was to 'determine whether or not it (sic) should be  
24 included on the National Priorities List of Superfund sites.'

25 "Do you see that language?

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1 A "I do.

2 Q "And he also writes that, again, his understanding, of  
3 EPA's investigation is that it's being considered for the  
4 Superfund site because of areas that were closed during  
5 Atlantic Richfield's operation of the site.

6 "Do you see that portion of the letter?

7 A "I see that portion of the letter, yes.

8 Q "And then Mr. Ryan writes the EPA that 'Any liability for  
9 these sites would be the responsibility of ARCO.'

10 "Do you see that language?

11 A "I do see that.

12 Q "Okay. Well, let me -- let me show you another exhibit  
13 and maybe that will refresh your recollection.

14 "It's an April 29, 1988 letter. And we'll mark this as  
15 Exhibit 8.

16 "And it's a couple of pages long but the first page is  
17 Bates-stamped ARC-5287.

18 A "Okay. Yeah, I have 5287, yes.

19 Q "Okay. And that --

20 "Are you looking at a letter from you to Mr. Payne dated  
21 April 29, 1988?

22 A "Yes.

23 Q "Okay. And if the exhibit came through correctly, it  
24 should also enclose a letter from you to Mr. Harris as well of  
25 the same date.

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1           "Is that attached to the exhibit?

2 A       "Yes, it is.

3 Q       "Okay. Why don't you take a moment to review that and my  
4 first question is simply whether that is a response letter to  
5 the two previous exhibits that we've marked as 6 and 7.

6 A       "Yes, it is a response to the two letters, yes.

7 Q       "All right. And in this letter you disagree with  
8 Mr. Ryan's assertion that any liability for these sites would  
9 be the responsibility of ARCO, right?

10 A       "That's correct."

11           MR. RAUCHWAY: Moving to page 52, line 3.

12 Q       "Now, this letter, April 29, 1988, was before the  
13 expiration of ARCO's indemnity obligation in the Acquisition  
14 Agreement, right?

15 A       "That is correct.

16 Q       "And during this period Columbia Falls Aluminum,  
17 including through letters that were addressed to you or  
18 received by you, was taking the position that Atlantic  
19 Richfield was responsible, through the Acquisition Agreement,  
20 for environmental issues that dated from Atlantic Richfield's  
21 operation of the site?

22 A       "I believe --

23           "Yes, that's my understanding what -- what they were  
24 asserting.

25 Q       "Okay. Let's move on from that exhibit and look at

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1 another one.

2 "This is a letter from Brack Duker to James S. Morrison,  
3 and a copy to you, dated November 2, 1988, Bates Number  
4 ARC-12217.

5 "Let me know when you have that in front of you.

6 A "I have that in front of me, yes.

7 Q "Okay. Now, here in this letter Mr. Duker is confirming  
8 the resolution of a number of disputes between CFAC and ARCO  
9 at the time, right?

10 A "Well, he is reciting that there were these discussions  
11 and that he understands 'we have agreed as follows.'

12 "That's his understanding of what he thinks was agreed.

13 Q "And some of these disputes are environmental disputes,  
14 right?

15 A "Yes, there are several of them that are. The second and  
16 third paragraphs or bullet points seem to be what you would  
17 call environmental issues.

18 Q "And, again, this is before the -- the deadline in the  
19 parties' agreement for CFAC to assert claims against ARCO,  
20 right?

21 A "Yes, sir.

22 Q "So during this time then, the time period when you were  
23 involved, CFAC not only made certain claims related to  
24 environmental issues but Atlantic Richfield actually agreed to  
25 pay some; is that accurate?

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1 A "That ARCO --

2 "Can you repeat that?

3 Q "Sure.

4 "My question was during this time period, the 1988 time  
5 period, CFAC not only made certain claims related to  
6 environmental issues at the site but Atlantic Richfield  
7 actually agreed to pay some of those claims; is that accurate?

8 A "Yes, I think that -- that is accurate as to these two  
9 claims that I mentioned and we -- we did agree to pay those  
10 claims.

11 Q "In the final bullet point in this letter there is a  
12 reference to \$4,011,000 and change there.

13 "Do you see that reference?

14 A "Yes, I do.

15 Q "Does that refer to the approximately 4 million dollars  
16 that was the subject of the Supplemental Agreement that we  
17 marked as Exhibit 2 earlier today?

18 A "Yes, it does.

19 Q "And did MAIC or CFAC end up repaying that approximately  
20 \$4 million to Atlantic Richfield?

21 A "I believe it did.

22 Q "And did they --

23 "Did CFAC or Mr. Duker agree in repaying those funds that  
24 the company had hit the profitability benchmarks in the  
25 Supplemental Agreement such that that 4-million-dollar

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1 repayment obligation was triggered?

2 A "I -- I would understand that to be the case here, yes.

3 Q "Okay. Let's look at another letter which we'll mark as  
4 Exhibit 10.

5 "It's dated November 29, 1988 and from Mr. Payne, Bates  
6 Number ARC-3714.

7 "Do you have that letter?

8 A "I have that.

9 Q "Okay. In this letter Mr. Payne is noting that -- or  
10 informing ARCO that effective March 23, 1989, the EPA has  
11 reclassified spent potliners as hazardous waste.

12 "Were you aware that at some point in -- during your  
13 involvement in the site EPA changed the regulatory  
14 classification of spent potliner from nonhazardous waste to  
15 hazardous waste?

16 A "Yes, I was -- I was aware of it and was -- most probably  
17 I was aware of it through this -- this letter. I cannot  
18 exclude that I might have heard it otherwise but I certainly  
19 was so informed in this letter.

20 Q "And Mr. Payne here is, once again, giving notice of a  
21 possible indemnity claim to Atlantic Richfield based on the  
22 spent potliner that Atlantic Richfield may have disposed of at  
23 the site; is that right?

24 A "Yes, that's -- that's what he's saying in the last  
25 paragraph on the second page.

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1 Q "So this is another example of Columbia Falls taking the  
2 position that environmental liabilities were covered by the  
3 indemnity provision in the parties' Acquisition Agreement?

4 A "That is correct, yes.

5 Q "Okay. Let's move on from this one and let's mark as  
6 Exhibits 11 and 12 these two documents because they appear to  
7 go together.

8 "11 will be an August 24, 1990 letter from Brack Duker to  
9 John Lucas which is Bates-stamped ARC-4843.

10 "And Exhibit 12 will be a longer letter from Brack Duker  
11 to Atlantic Richfield Company, Bates-stamped ARC-349."

12 MR. RAUCHWAY: Moving to page 57, line 24.

13 Q "Okay. So this first -- this first letter here,  
14 Exhibit 11, appeared to have been a -- a cover letter that  
15 Mr. Duker sent you personally that also enclosed a copy of the  
16 document we've marked as Exhibit 12; is that right?

17 A "That's correct, yes.

18 Q "And in Exhibit 12, in the first paragraph, Mr. Duker  
19 characterizes the list in his letter as 'identified  
20 environmental risks or hazards.'

21 "Do you see that reference?

22 A "'Relating to' --

23 "'The following list of identified environmental risks or  
24 hazards is intended to supplement previous correspondence.'

25 "Yes.

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1 Q "Okay. Right.

2 "And you continued reading in the part where Mr. Duker  
3 refers to 'previous correspondence' directed to Atlantic  
4 Richfield between the time of the acquisition of the property  
5 and this date.

6 "And my question is the issues that are laid out in  
7 Mr. Duker's letter, numbered 1 through 12, are those many of  
8 the same environmental issues that CFAC had been raising with  
9 Atlantic Richfield since you started working on this site in  
10 1986?

11 A "Yes, I think that's -- that is correct.

12 Q "And if you can refer back to a document we marked as  
13 Exhibit 3, I believe, the proposed amendment from  
14 Mr. Thamistocles Michos, the August 12, 1986 letter and  
15 proposed amendment.

16 A "I have that.

17 Q "My question is are the issues enumerated in Mr. Duker's  
18 August 24, 1990 letter the same issues that CFAC was  
19 attempting to preserve in the proposed amendment that  
20 Mr. Michos sent you?

21 A "They were of the same -- the same type. And I think,  
22 obviously, several of them were -- were exactly the same.  
23 They seem to be set out a little differently. And I'd have to  
24 go back through all the correspondence back and forth and take  
25 a check to make sure that each one of them was exactly the

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1 same one. They're the -- of the same type and character.  
2 And, you know, certainly, they talk about groundwater  
3 contamination, the potliners, the visible emissions. I think  
4 all of those go all the way back and probably some of the  
5 other ones.

6 "Some of the others here may be a little more recent than  
7 the ones that were, you know, mentioned or referred to in  
8 Mr. Michos' draft because we didn't have any schedules that  
9 actually precisely listed out exactly what it was. But  
10 they're of the same nature and kind and undoubtedly in most  
11 cases the same things that had been bandied back and forth  
12 for -- for years."

13 MR. RAUCHWAY: Moving to line 11 on page 60.

14 Q "So please keep Exhibit 12 out in front of you there.  
15 I'd also like you to pull out what we'll mark as Exhibit 13  
16 which is a pleading, it will have the caption of this case on  
17 it, it says 'Complaint' and it says -- at the top it has a  
18 file stamp number, it says 'Filed 7-13-18.'

19 "Do you have that in front of you, Mr. Lucas?

20 A "Yes, I do.

21 Q "Okay. I'll represent to you that that is the complaint  
22 that Columbia Falls Aluminum Company has filed in this  
23 lawsuit, without Exhibits, it's just -- it's just the  
24 pleading. And I'd like you to look at paragraph 85 first.  
25 And maybe -- maybe it would just be simpler to read

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1       paragraphs 85 through 87 and let me know when you've done  
2       that.

3       A       "Okay. I've read 85 through 87.

4       Q       "You've read those paragraphs, Mr. Lucas?

5       A       "Yes.

6               "Do you want me to go beyond 87?

7       Q       "Not just yet. Let me ask you a question -- a couple  
8       questions first.

9               "Paragraphs 85 through 87 of CFAC's complaint refer to  
10      'cyanide and fluoride' contamination in the groundwater,  
11      right?

12     A       "Yes, it does.

13     Q       "And that is the same issue identified by Mr. Duker in  
14      his August 24, 1990 letter under item 1, 'Groundwater  
15      Contamination,' right?

16     A       "Yes. They seem to be the -- the same -- same -- the  
17      same issue, groundwater contamination of cyanide and fluoride.  
18      This is along the sludge -- sludge pond.

19               "It refers to the -- the complaint refers to the  
20      'scrubber sludge pond.' I don't know that it -- these  
21      paragraphs refer to the same one, unlined. But if -- I would  
22      think they were the same -- the same thing.

23     Q       "Well, take a look at paragraphs 99 and 100.

24     A       "Yes.

25     Q       "Okay. Paragraphs 99 and 100 refer to 'cyanide and

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1 fluoride concentrations' under or near the wet -- excuse me,  
2 the 'Wet Scrubber Sludge Pond,' right?

3 A "Yes.

4 Q "And looking at Mr. Duker's letter at item 5, does that  
5 appear to be the same issue he identifies under the heading  
6 'Closed Scrubber Sludge Pond'?

7 A "Yes.

8 Q "Please look at paragraphs 88 and 89 of the complaint and  
9 particularly the references to spent potliner in what's  
10 referred to as the 'West Landfill.'

11 A "Yes. I've read those.

12 Q "Okay. And do those appear to you to be the same issues  
13 that Mr. Duker was raising back in 1990 under the heading  
14 'Closed Spent Potliner Landfill,' number 7 in his letter?

15 A "Yes, it does.

16 Q "Okay. Two more.

17 "Take a look at paragraph 116 of the complaint, please,  
18 under the heading of 'Arco Caused Cyanide, Fluoride, and PAH  
19 Contamination In, Around, and Under the South Percolation  
20 Ponds.'

21 A "116 to how far, please?

22 Q "Just that paragraph is fine.

23 A "Okay.

24 Q "Well, you know just to be -- I'm sorry.

25 "Just to be complete, why don't you read paragraphs 117

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1 and 118 because that will be that entire subsection of the  
2 complaint.

3 A "Okay.

4 Q "Okay. Does -- does that issue that is identified in  
5 paragraphs 116 through 118 of CFAC's complaint appear to be  
6 the same issue that Mr. Duker raised in his August 1990 letter  
7 under item 9, the 'South Percolation Ponds'?

8 A "Yes, it seems to be the same -- same claim, same issue.

9 Q "Right.

10 "Mr. Duker is complaining in August of 1990 that ARCO  
11 caused cyanide, fluoride, and organic compound contamination  
12 around the south percolation ponds. And CFAC's 2018 complaint  
13 is also alleging that ARCO caused cyanide, fluoride, and PAH  
14 contamination around the south percolation ponds; isn't that  
15 right?

16 A "That's what the documents state, yes."

17 MR. RAUCHWAY: Moving to page 65, line 17.

18 Q "Okay. Let me -- let me sharpen that in just one  
19 respect.

20 "In paragraph 10 of Mr. Duker's August 1990 letter, one  
21 of the issues that he is identifying is contamination of  
22 cyanide in the area of the north percolation pond, right?

23 A "Yes.

24 Q "All right. And if you look at paragraph 130 of CFAC's  
25 complaint, one of the items identified in that paragraph is

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1    'cyanide...in, around and under the...North Percolation  
2    Ponds,' right?

3    A     "Yes. It does refer to the 'North Percolation Ponds' as  
4    does paragraph 10, obviously.

5    Q     "And specifically that paragraph of CFAC's complaint  
6    refers to cyanide in the area of the north percolation pond,  
7    right?

8    A     "Yes, it does.

9    Q     "Turning back to Mr. Duker's letter again, his August 24,  
10   1990 letter, and in the end of the final paragraph Mr. Duker  
11   is asking for an indemnity from ARCO for the enumerated issues  
12   in his letter, including the ones we just discussed, correct?

13        "Mr. Lucas, did you understand this letter, when you  
14   received it, to be a demand for indemnity from CFAC?

15   A     "Yes. Yes. It was a demand that we accept the claims  
16   here as coming within the scope of the indemnification clause  
17   in our agreement, yes.

18   Q     "And Mr. Duker sent this letter to Atlantic Richfield  
19   just about a week before Atlantic Richfield's indemnity  
20   obligation expired; isn't that right?

21   A     "That's correct. The contract provided the indemnity  
22   obligation expired on the 31st of August, 1990."

23            MR. RAUCHWAY: Okay. Moving to page 68, line 6.

24   Q     "Okay. Mr. Lucas, please pull out the letter dated  
25   September 14, 1990 from Mr. Floyd George to Brack Duker and

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1 we'll mark that as Exhibit 14. And the Bates Number on the  
2 first page of that is ARC-3737.

3 A "Yes, I -- I have it.

4 Q "And do you recognize this letter, Mr. Lucas?

5 A "Yes, I do.

6 Q "It looks like you're copied on the letter.

7 "But who was Mr. C. Floyd George, Jr., who signed the  
8 letter?

9 A "Well, pursuant to his title there, he's the Manager,  
10 Non-Operating Assets.

11 "He was the business person tasked with keeping track of  
12 the histories and any follow-up with respect to various  
13 divested aspects that we had -- had sold in recent years. And  
14 he had previously been -- and had all through this time been  
15 keeping track of the performance of the Columbia Falls  
16 Acquisition Agreement.

17 "And we recall from one of the earlier exhibits that he  
18 had previously been contacting Jim Morrison who was the  
19 executive vice president in charge of this area of the  
20 company. And then Brack asked that I be the contact person  
21 rather than Floyd. But Floyd was the -- the guy on the  
22 business end who was responsible for keeping track of the  
23 performance of the Acquisition Agreement by the parties.

24 Q "And without revealing the substance of any discussions  
25 you may have had with Mr. George or others, were you involved

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1 in the drafting of this letter we've marked as Exhibit 14?

2 A "Yes, I was.

3 Q "So Exhibit 14 is a response to Mr. Duker's August 24,  
4 1990 letter, right?

5 A "That's correct.

6 Q "And looking at the second paragraph, the first point  
7 that ARCO makes in the George response letter is that CFAC  
8 hasn't actually incurred any costs or expenses for the  
9 environmental issues that Mr. Duker identified in his letter.

10 A "That was the -- the -- the thing that we were pointing  
11 out in this letter as to why that letter of alleged claims did  
12 not comply with the requirements of the indemnity clause.

13 Q "And that paragraph concludes with the sentence 'Such a  
14 potential, contingent environmental risk or hazard, even if it  
15 were to occur in the future, is not a claim covered within the  
16 provisions of Section 10(a).'"

17 "Do you see that language?

18 A "I do see that language.

19 Q "And was that an accurate statement of ARCO's position at  
20 the time?

21 A "Yes, absolutely.

22 Q "ARCO was telling CFAC the contingent environmental  
23 liabilities are on them, not on ARCO, correct?

24 A "That's -- that's the substance.

25 "After August 31st all -- all of these things were

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1 obligations of -- of CFAC. We had no obligation to step in.

2 Q "And in the paragraph after that there's some additional  
3 explanation about ARCO's view of the overall deal that the  
4 parties made in the Acquisition Agreement, right?

5 A "That's correct. Yes.

6 Q "And the gist of this is Mr. George's letter is informing  
7 CFAC that ARCO didn't agree to take on contingent  
8 environmental liabilities when they struck the deal that's  
9 memorialized in the Acquisition Agreement; is that accurate?

10 A "Yes. That's -- that's our feelings, our understanding  
11 and summary of -- of the -- of the background and what the  
12 agreement was all about.

13 "ARCO had transferred this valuable smelter, which had  
14 been recently rebuilt, for a dollar to CFAC. And had provided  
15 funding to Brack Duker and his group to run it while it was  
16 getting on its feet. And we gave a protection for five years  
17 to cover any losses that they incurred during this period as  
18 they were starting up the business and making it a success as  
19 an ongoing operation.

20 Q "And that paragraph concludes with the language 'It  
21 cannot be imagined that ARCO intended to give away a valuable  
22 asset and then agree to a continuing, open-ended obligation to  
23 keep the buyer whole from any subsequent liabilities,' and  
24 then it goes on.

25 "Was that an accurate statement of ARCO's view of the

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 Acquisition Agreement at the time?

2 A "Yes, it was. That's -- that is our effort to state as  
3 clearly as we could what -- what the nature of the deal was  
4 and why the indemnity was structured the way it was  
5 structured."

6 MR. RAUCHWAY: Moving to page 73, line 7.

7 Q "Did you, in fact, have telephone discussions with  
8 Mr. Duker after you received this letter, Exhibit 11?

9 A "Yes, I did but I -- I think that was after we'd already  
10 responded. I may have had another discussion but I certainly  
11 had one conversation with Mr. Duker about the letter and about  
12 our response to the letter.

13 Q "So you think this discussion would have taken place  
14 after Exhibit 14, the Floyd George letter, had been sent?

15 A "Yes. I -- if this is the one that I'm thinking of.

16 "But I also think it might be possible that I had a  
17 discussion with -- with Brack before that, although I sort of  
18 doubt it. I think the positions were pretty well understood  
19 and we were going to respond to him in writing rather than  
20 anything to really discuss around.

21 Q "Okay. Well, let's -- let's focus on the discussions  
22 after the Floyd George letter went out.

23 "Was Mr. Duker surprised that ARCO had rejected the  
24 indemnity claimed in his August 24, 1990 letter?

25 A "Did he -- did he object to our rejection of the claims

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1 and was surprised? No.

2 "He indicated that our response was pretty much what he  
3 had been told by his lawyers is likely that he would hear from  
4 ARCO. And that he was probably putting the -- his letter and  
5 our response in the file.

6 Q "Did Mr. Duker say anything about whether CFAC really  
7 intended to pursue the indemnity demands that he made in his  
8 August 24, 1990 letter?

9 A "He -- he only -- he said basically, as I recall it, that  
10 he was unlikely to press any of the claims unless there was,  
11 you know, some pressure from the labor union or it was  
12 actually declared a Superfund site, then maybe he would -- he  
13 would do so.

14 "But my impression was overall that he basically was  
15 acquiescing in the view that our reading and understanding of  
16 the -- of the provision was correct and that was what the  
17 deal -- the deal was between the parties.

18 Q "Did Mr. Duker respond to the position that ARCO  
19 articulated in the Floyd George letter -- Floyd George's  
20 letter, that ARCO did not have a continuing open-ended  
21 liability to CFAC to indemnify the site?

22 A "I -- I don't know that he contested our denial of such  
23 an open-ended liability. Of course, this all was a long time  
24 ago.

25 Q "Can you remember anything more about those discussions?

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1 A "Well, I think -- I think that's -- that's the gist of  
2 it; that he, you know, was not surprised. He -- he didn't  
3 disagree with it. He didn't really intend to do anything  
4 about it.

5 "And as I say, I -- I got the idea that he basically  
6 concurred, I think the word 'acquiesced' is probably better,  
7 that, you know, we had the -- the better position and we were  
8 correct.

9 "He certainly didn't say that. I'm not trying to imply  
10 that he straight-up said that our reading was right. It was  
11 just that the impression was that he wasn't going to argue  
12 about it. Or pursue it.

13 Q "At any point in your discussions with Mr. Duker, did he  
14 ever suggest that CFAC would have any claim against ARCO after  
15 August 31st of 1990?

16 A "No. No.

17 Q "At any point in your discussions or correspondence with  
18 anyone at CFAC, did anyone on the CFAC side assert or suggest  
19 that they would have a claim against ARCO of any kind after  
20 August 31, 1990?

21 A "No.

22 Q "From your involvement in the parties' course of conduct  
23 after the Acquisition Agreement was signed, did you believe  
24 that it was understood by both parties that CFAC could not  
25 make any kind of claim against ARCO after August 31, 1990?

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 A "Yes. That's the -- the --

2 "The Indemnity Agreement provided that they may not make  
3 any claim under the indemnity after that date. And as of the  
4 date, that August 31st date, there was no basis for a claim.  
5 There were no losses, expenses, et cetera, to do that. And I  
6 don't recall anybody saying that there could be a claim  
7 brought after that date because --

8 "No. No one ever, to my knowledge, said -- raised any  
9 issue that CFAC would have a claim other than under the  
10 Indemnity Agreement. And the Indemnity Agreement provision  
11 had expired."

12 MR. RAUCHWAY: Move to page 81, line 13.

13 Q "Okay. During your tenure, Mr. Lucas, was there any  
14 instance in which a third party, and by that I mean, you know,  
15 whether it be EPA, State of Montana, any private party other  
16 than CFAC made a claim against ARCO for operations at the  
17 Columbia Falls site?

18 A "I'm -- I'm -- I'm not aware of any third party making a  
19 claim against ARCO with respect to the operation of Columbia  
20 Falls. I would have imagined if -- if anything significant,  
21 it probably would have made it to me, but I -- I can't exclude  
22 that somebody didn't claim something. Somebody.

23 "Now, I -- I don't -- I'm not aware of any third-party  
24 claims with respect to Columbia Falls operations themselves.

25 Q "So is it accurate that the only claims that you are

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1 aware of when you were working on Columbia Falls issues were  
2 claims by CFAC itself; is that accurate?

3 A "Yes, that's -- that's -- that's accurate, yes.

4 Q "Is it also accurate, then, that ARCO had no occasion to  
5 tender an indemnity claim or demand to CFAC during the time  
6 that you were working on this site?

7 A "No, not -- not -- I'm not -- not that I'm aware of.

8 Q "And my question was 'is it...accurate.'

9 "I think you were answering no, it -- it didn't happen to  
10 your knowledge; is that correct?

11 A "No, it didn't -- it didn't happen.

12 "To my knowledge, we never tendered any claim against  
13 CFAC that was brought by a third party against us, no.

14 Q "Other than your reference here, the sentence I just read  
15 you, that 'I note in passing' sentence, are you aware of any  
16 correspondence between CFAC and ARCO during your involvement  
17 at the site concerning CFAC's obligation to indemnify ARCO?

18 A "No, not -- not that came to me that I was aware of.

19 "I was not aware of -- of any claims by CFAC outside of  
20 the Indemnity Agreement which we're discussing now.

21 Q "Okay. My question was a little bit different which was  
22 other than this sentence, are you aware of any correspondence  
23 between the parties discussing CFAC's obligation to indemnify  
24 ARCO?

25 A "Well, outside of my passing reference in this document

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 that we've just marked, I'm not aware of any, no."

2 MR. RAUCHWAY: Moving to page 85, line 19.

3 Q "Okay. My -- I'm happy to clarify this.

4 "My question, I think, that started this line of inquiry  
5 was whether you had any discussions with Mr. Duker or anyone  
6 else at CFAC about CFAC's obligation to indemnify ARCO. You  
7 said you couldn't exclude the possibility.

8 "And then I followed up by saying 'Do you have any  
9 present recollection of...discussions (sic) like that?' That  
10 was the question.

11 A "No.

12 Q "Exhibit 17, I think I already described it; it's the  
13 March 2, 1992 Milner letter.

14 "Mr. Lucas, do you have that one?

15 A "I do.

16 Q "Okay. Who was Lary Milner? Or who is Lary Milner?

17 A "Lary Milner was an ARCO attorney that specialized in  
18 environmental law and matters based in Denver, Colorado at  
19 what was once the -- I'm sure that is the same building that  
20 the --

21 "Anyway, in Denver, Colorado.

22 Q "And at some point did Mr. Milner take over for you in  
23 your responsibilities concerning the Columbia Falls site?

24 A "Yeah. My -- yes. This letter sort of indicates that  
25 that had happened by that time; whether it had happened

*LUCAS DIRECT EXAMINATION BY RAUCHWAY*

1 substantially sooner, I don't -- I don't know.

2 "But you can see he's -- he's copied Floyd George and  
3 he's copied me. And -- and I -- you know, just, I think, to  
4 keep us up to date at that point. But from around this time  
5 I -- I think I was pretty well out of the ongoing picture of  
6 issues involving Columbia Falls."

7 MR. RAUCHWAY: All right. Your Honor, I'd like to  
8 move for the admission of Exhibit 3. I think all the other  
9 exhibits that we discussed during that exam are already in  
10 evidence. Exhibit 3 was the one exhibit --

11 THE COURT: Yes.

12 MR. RAUCHWAY: -- that they objected to and that  
13 you --

14 THE COURT: The objection was overruled.

15 MR. AMENT-STONE: Your Honor, I would ask to be  
16 heard on this objection, if possible.

17 THE COURT: No.

18 MR. AMENT-STONE: Your Honor, can -- may I offer  
19 another document as the actual exhibit? This is the actual --

20 THE COURT: Wait until it's your turn here, okay?

21 MR. RAUCHWAY: So are you going to read the  
22 cross-examination?

23 MR. LAUER: He'll read it.

24 MR. AMENT-STONE: Page 88, line 19.

25 ///

LUCAS CROSS-EXAMINATION BY AMENT-STONE

1                   CROSS-EXAMINATION

2     BY MR. AMENT-STONE:

3     Q     "Can you -- can you identify any writing from CFAC or  
4     anyone representing CFAC in which CFAC, in writing, waived its  
5     right to contribution under CERCLA?

6     A     "I don't recall any correspondence or anything about  
7     contribution under CERCLA being received from CFAC, let alone  
8     requesting a waiver of it. In the time period, I don't think  
9     the issue of contribution and CERCLA was -- was ever  
10    mentioned.

11    Q     "And can you identify any writing in which you or anyone  
12    else representing ARCO informed CFAC that it was ARCO's  
13    position that after August of 1990 CFAC was obligated to  
14    indemnify ARCO for claims that are so-called claims prior to  
15    the closing date?

16    A     "Well, no, provided you mean by 'claims' that relate to  
17    the situation as it existed before the closing date and had  
18    not been altered or changed by CFAC after the closing date by  
19    their operation of the plant.

20    Q     "My question was can you identify any writing from ARCO  
21    to CFAC in which ARCO expressed the view that after August of  
22    1990, CFAC was obligated to indemnify ARCO for claims that --  
23    that were based on pre-closing conditions?

24    A     "No."

25                   MR. AMENT-STONE: "Moving to page 92, line 19.

*LUCAS CROSS-EXAMINATION BY AMENT-STONE*

1 Q "You -- you were shown and spent a fair amount of time  
2 dealing with the August 24, 1990 letter from Mr. Duker to the  
3 corporate secretary of Atlantic Richfield Company and it lists  
4 12 categories of contaminants.

5 "Did you or anyone at ARCO dispute the facts as set forth  
6 in Mr. Duker's letter?

7 A "To my knowledge, I did not dispute the facts of -- of  
8 the mention of those. I -- I may have disputed the fact as to  
9 their implications. But I don't think that we responded to  
10 that letter by disputing the facts. It was addressed -- the  
11 letter was addressed to the requirements under the indemnity  
12 clause and without getting into the details as to whether it  
13 was 50 tons or 60 tons or 23 tons or something."

14 MR. AMENT-STONE: Moving to page 94, line 18.

15 Q "With respect to Exhibit 14 that you helped draft, the  
16 September 14, 1990 letter, there's reference there to ARCO  
17 mentioning the sale of the asset, the 'valuable asset' in  
18 ARCO's terms, to Mr. Duker's group.

19 "Are you familiar with the efforts by Atlantic Richfield  
20 to sell the smelter prior to the 1985 acquisition by  
21 Mr. Duker's group?

22 A "I was not familiar at the time. It was my understanding  
23 that Brack Duker initially was responsible for trying to find  
24 a buyer for it and then wound up leaving ARCO, forming his  
25 group and submitting the offer to buy the company.

*LUCAS CROSS-EXAMINATION BY AMENT-STONE*

1           "But I was not involved in the sale process or the effort  
2 to sell the smelter. That's the best of my recollection  
3 sitting here. I --"

4           MR. AMENT-STONE: Moving to page 104, line 13.

5 Q        "And the question I have is when you became involved with  
6 the level of responsibility for legal issues at ARCO, did you  
7 familiarize yourself with the past practices and any  
8 violations of environmental laws or regulations?

9 A        "No, I -- I did not. That was not the scope of my  
10 involvement with the smelter and Columbia Falls Aluminum  
11 Company."

12           MR. AMENT-STONE: Skipping to page 116, line 12.

13 Q        "Bear with me.

14        "Could you turn back to the August 24, 1990 letter from  
15 Mr. Duker which I believe is Exhibit -- Exhibit -- it's hard  
16 to tell but it's either Exhibit 11 or 12. The long -- the  
17 longer letter.

18 A        "I think it was number 12.

19 Q        "So Mr. Duker lists a number of items. Let's take  
20 number 1, he lists 'Groundwater Contamination.'

21        "Can you tell us what steps ARCO took to reduce or arrest  
22 the groundwater contamination that was coming from the various  
23 ponds and sites at the -- the smelter?

24 A        "No."

25           MR. AMENT-STONE: Moving to page 118, line 20.

*LUCAS CROSS-EXAMINATION BY AMENT-STONE*

1 Q "Do you know who drafted the indemnity paragraphs,  
2 paragraph 10?

3 A "No.

4 Q "Did you ever have discussions with anyone who had  
5 personal knowledge of the origin of the phrases in the  
6 indemnity paragraphs?

7 A "Not that I can recall, no.

8 Q "Did you see any written material by anyone who had had  
9 personal knowledge of the drafting and negotiating process in  
10 which the written material described the -- the meaning behind  
11 phrases in Section 10 of the Acquisition Agreement?

12 A "No."

13 MR. AMENT-STONE: That's it for the reading.

14 At this time, Your Honor, if I can offer the actual  
15 1986 settlement that Exhibit 3 was a draft of?

16 THE COURT: What's the exhibit number?

17 MR. AMENT-STONE: It is not an exhibit which is  
18 part --

19 MR. LAUER: Pick a number.

20 MR. AMENT-STONE: It can be Exhibit 870.

21 THE COURT: Is there any objection?

22 MR. AMENT-STONE: I'm happy to hand counsel a  
23 copy --

24 MR. RAUCHWAY: Your Honor, I don't even know what  
25 document he's talking about. This isn't on the exhibit list.

1 MR. AMENT-STONE: Here it is (handing).

2 Your Honor, may I be heard on this?

3 THE COURT: Briefly.

4 MR. AMENT-STONE: Exhibit 3 is a draft settlement  
5 communication under 408. It is of minimal probative value  
6 under 403. It has -- it refers to an attached schedule of  
7 claims which was not produced. We first saw this document two  
8 hours before the Lucas deposition and later discovered that  
9 its reference to environmental hazards, which is in tandem  
10 with references to worker-related claims, actually is better  
11 understood in this final 1986 settlement as regarding OSHA-  
12 and MSHA-type asbestosis claims. Devoid of proper context  
13 without the schedule of claims, without the context of the  
14 actual settlement, Exhibit 3 offers very little clarification.

15 THE COURT: All right. Thank you.

16 What's your position on -- what is it? 783?

17 MR. AMENT-STONE: You mean 870?

18 MR. RAUCHWAY: Your Honor, the proposed amendment  
19 that Mr. Lucas testified about has been known to the plaintiff  
20 here since June of 2020. It was the very first deposition in  
21 the case. It was on our exhibit list as Exhibit 3 since we  
22 exchanged those draft exhibit lists in the fall of last year,  
23 so if they wanted to add another document to provide context  
24 with it, they certainly could have done that at any time in  
25 the next couple of years.

1           THE COURT: No, what's your position to it now that  
2 you've introduced Exhibit 3?

3           MR. RAUCHWAY: We object to this document as not  
4 having been put on the exhibit list despite the many, many  
5 opportunities that CFAC has had to do so.

6           THE COURT: Let me see the document, please.

7           MR. AMENT-STONE: (Handing.)

8           (Pause.)

9           THE COURT: So you marked this as 783?

10          MR. AMENT-STONE: This will be Exhibit 870.

11          THE COURT: 870?

12          MR. AMENT-STONE: Yes.

13          THE COURT: It will be received over the objection  
14 of the defendant.

15          MR. AMENT-STONE: Thank you, Your Honor.

16          MR. RAUCHWAY: Your Honor, just to clarify:  
17 Exhibit 3 was admitted?

18          THE COURT: Yes.

19          Here you go, Nicole (handing).

20          Call your next witness, please.

21          MR. RAUCHWAY: Your Honor, the defendant calls  
22 Mr. Subodh Das by deposition.

23          THE COURT: Do you have those sheets of paper for  
24 me?

25          MR. RAUCHWAY: We do, Your Honor.

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1                   THE COURT: Again, the record will reflect that, the  
2 reading of the deposition, the witness has previously been  
3 sworn.

4                   You may proceed.

5                   MR. RAUCHWAY: Beginning on page 11, line 8.

6                   WHEREUPON,

7                   SUBODH DAS, Ph.D.,  
8 called for examination by deposition by counsel for defendant,  
9 after having been previously sworn to testify the truth, the  
10 whole truth, and nothing but the truth, testified as follows:

11                  DIRECT EXAMINATION

12 BY MR. RAUCHWAY:

13 Q "Good morning, Dr. Das.

14 A "Good morning. Good afternoon here.

15 Q "Right. That's right. You're in --

16                  "It's noontime there and you're in -- outside of  
17 St. Louis, right?

18 A "Correct.

19 Q "All right. Would you please introduce yourself to the  
20 Court?

21 A "Yes.

22                  "My name is Subodh Das. I'm a metallurgical engineer by  
23 training. And I have been in the aluminum industry for some  
24 45 years, starting 1974 onwards. I'm still very active."

25                  MR. RAUCHWAY: Moving to page 13, line 3.

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1 Q "Okay. So I would like you to give the Court a little  
2 bit of your professional background.

3 "And you were kind enough to provide me with a CV, so  
4 maybe we can mark that as an exhibit and it will make this a  
5 little bit more efficient.

6 "Okay. Dr. Das, is the document we've just marked as  
7 Exhibit 69 a correct copy of the CV -- excuse me, the CV you  
8 provided to me a few days ago?

9 A "Yes. I see that.

10 Q "Okay. And is this Exhibit 69 accurate with respect to  
11 how it summarizes your professional experience?

12 A "Yes, it does.

13 Q "And is it current as well?

14 A "Yes, it is."

15 MR. RAUCHWAY: Moving to page 16, line 6.

16 Q "Okay. And you were with Anaconda or ARCO in some  
17 fashion from 1981 until 1999?

18 A "That's correct."

19 MR. RAUCHWAY: Moving to page 24, line 14.

20 Q "And have you confronted environmental issues associated  
21 with aluminum production in each of your major roles over the  
22 course of your career?

23 A "Can you explain the word 'confronted'? What do you mean  
24 by that?

25 Q "Well, have you had occasion to -- to deal with

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1 environmental issues, work on them, you know, either in a  
2 research capacity or if you're at a company in how to handle  
3 certain, you know, practices at the company at the time, if  
4 they're -- in a consulting role, in providing advice to other  
5 companies on how to handle environmental issues, all those  
6 sorts of things.

7 A "Yes.

8 "Jon, when I worked for Alcoa and then when I worked for  
9 Anaconda/ARCO, I was involved with those issues in terms of  
10 finding mitigating -- mitigating solutions or affecting the  
11 impact. And then ever since, you know, I have been with the  
12 University of Kentucky and on my own, I'm very involved with  
13 the carbon -- carbon dioxide emission coming from smelters.

14 "Yes. I would say I am -- I have been -- I am very  
15 involved directly with -- with the environmental issues.

16 Q "Okay. So let's --

17 "As I -- as I promised, I want to talk about your -- your  
18 time at Anaconda and later ARCO in much more detail; so let's  
19 rewind to 1981 when you started with Anaconda Aluminum in  
20 Tucson.

21 "Can you tell us what your job responsibilities were when  
22 you started there in Tucson?

23 A "Okay. In Tucson when I was there in the research lab, I  
24 would say I had three major job responsibilities.

25 "The most important was to provide technical service to,

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1 at that time owned by ARCO/Anaconda, the Columbia Falls  
2 Aluminum Smelter in -- in Montana and the Sebree Aluminum  
3 Smelter in -- in -- in Owensboro or Sebree, Kentucky. That  
4 was one responsibility.

5 "The second responsibility I had was to develop the new  
6 processes to -- to mitigate or to lower the costs of  
7 production or environmental compliance at both Sebree and  
8 Columbia Falls. Specifically, I was involved in a research  
9 project involved with the -- finding a solution for the spent  
10 potline that was generated at Columbia Falls. And so  
11 that's -- yeah, that's two.

12 "And then I was involved in developing new alumina  
13 ceramics plant. That plant was developed and patented. And  
14 when I visited Tucson, Arizona three years ago the plant still  
15 is running under Sasol -- Sasol's ownership.

16 Q "Okay. Let's look at --

17 A "South African company. Sasol, I think."

18 MR. RAUCHWAY: Moving to page 28, line 19.

19 Q "Can you tell us a little bit about that?

20 A "Yeah. We -- when we --

21 "You know, when the research group was organized, it was  
22 a well-known fact that spent potline, it once was listed and  
23 then was delisted but could be listed again sometime in the  
24 future; so Columbia Falls was very interested in a research  
25 group headed by Dr. Ted Cambridge and me as a part to look at

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1 the spent potline disposal. And so we had three-pronged  
2 approach.

3 "One approach was to -- to find a way to extract the  
4 valuable -- valuable materials from spent potline, namely  
5 being carbon and fluoride, because they are -- both of them  
6 are pretty valuable, carbon for the BTU value and fluoride for  
7 the potline -- particle chemical value. And so I -- I worked  
8 on that part and that led me to visit Columbia Falls, Montana  
9 several times.

10 "And then the second aspect was that at the time Alcan  
11 was big company and they had activities in trying to recover  
12 these valuables and -- and the carbonaceous material from  
13 potline; so through Dr. Cambridge's association, because he  
14 came from Alcan, and Dr. Gil -- Dr. Kaufman's (associate), a  
15 joint venture conversation was initiated with Alcan and  
16 Anaconda to tackle the spent potline issues head-on.

17 "And the third was that at that time there were several  
18 aluminum smelters in the Pacific Northwest, two or three in  
19 Oregon and one in Washington, the State of Washington, all --  
20 all neighboring states; so -- so the discussion, and I was  
21 part of the conversation, with Reynolds and Kaiser.

22 "And they were -- they had the facilities to treat the  
23 spent potline; so conversation happened. And we began to ship  
24 some of the potline materials to Reynolds' facilities in  
25 Troutdale, Oregon and Dalles, Oregon. And then also Spokane

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1 to Kaiser materials. I was part of all that conversation.

2 "And we had good relation with Kaiser and Reynolds  
3 because both Reynolds and Kaiser and Anaconda was a  
4 partnership with Jamaica Alpart that refined bauxite to  
5 alumina and that alumina was sometimes used at Columbia Falls;  
6 so it was natural for us to approach Reynolds and Kaiser and  
7 they agreed to help us with shipping the spent potline to  
8 their facility for handling.

9 "Those were the three main activities that I was involved  
10 working directly with the Columbia Falls personnel."

11 MR. RAUCHWAY: Moving to page 31, line 25.

12 Q "Okay. And then you mentioned something about shipping  
13 some SPL to Kaiser and Reynolds. What were --

14 "What particularly were those companies extracting from  
15 the SPL?

16 A "Okay. SPL has three components. The number one,  
17 90 percent is carbon graphite because that's how the capsules  
18 are made.

19 "And -- and the number-two component is the aluminum  
20 fluoride or cryolite salt. That's very porous, that gets in  
21 the porosity of the carbon cathode and that's what leads to  
22 the exfoliation and the failure of carbon cathodes.

23 "And then the third one is the undesirable toxic elements  
24 that are found in combination of nitrogen, carbon and the salt  
25 at those high temperatures and electric current.

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1 Q "Okay. So what was --

2 "What were Reynolds and Kaiser extracting from the SPL  
3 that was shipped to them from Columbia Falls?

4 A "The most valuable component, even though by weight it  
5 would only be 10 percent, was the aluminum fluoride, or  
6 cryolite.

7 "Aluminum fluoride and cryolite are pretty expensive  
8 salt. They were at that time and that's true even today  
9 because of the shortage of the fluorine-based compound; so  
10 number-one economic incentive was to extract aluminum fluoride  
11 and cryolite by using a hydrometallurgical process.

12 "Once the leachate or leaching happened and you extracted  
13 the most profitable part, aluminum fluoride and cryolite,  
14 which is a mixture of aluminum fluoride and sodium fluoride,  
15 then you will incinerate in a kiln, or some kind of a furnace,  
16 to burn off the carbon to just get the BTU -- BTU values. And  
17 while you're burning, you also destroy the toxic compounds,  
18 like cyanides are a combination of the nitrogen, carbon and  
19 fluorine."

20 MR. RAUCHWAY: Page 34, line 6.

21 Q "Was it standard practice at that time, 1981 to 1983 or  
22 so, for aluminum smelters to landfill spent potliner after it  
23 was no longer, you know, in use in the reduction facility?

24 A "Yes. I would say there's a lot of literature that at  
25 that time it's quite standard that the spent potline, after

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1 its useful life, ranging from six years to ten years, they  
2 would be landfilled in a specially constructed and suitably  
3 lined landfill. And -- with the provision that they would be  
4 regularly monitored for water. And -- which I knew during my  
5 visits to the plant it was being done on a regular basis.

6 "And there are many clus- -- there are many clusters of  
7 smelters -- excuse me. There are many clusters of smelters  
8 all over the country and all over the world where, as a Good  
9 Samaritan, aluminum companies help each other to treat  
10 neighboring companies' spent potline. Even to this day, one  
11 such facility still exists in Arkansas.

12 Q "Do you have a sense for what percentage of spent  
13 potliner was sent offsite from 1981 to '83 as opposed to what  
14 was landfilled onsite?

15 A "I -- I would have very difficult time giving you a  
16 percent.

17 "All I remember is that a part, a small part, I don't  
18 know how small was 'small,' was shipped to those facilities.  
19 And a large, I don't remember how large is 'large,' was  
20 locally landfilled in a certified liner.

21 Q "Did you have any other involvement with the Columbia  
22 Falls facility between '81 and '83, aside from working on ways  
23 to handle the spent potliner?

24 A "Yeah. We had a couple, actually.

25 "We actually had a -- a combined (task) force between

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1 Columbia Falls plant and Sebree plant where we -- where we  
2 wanted to optimize the mixing of Soderberg, which is Columbia  
3 Falls, and prebake, that Sebree carbon anode. So I was  
4 involved, actually I led that effort, in optimizing the mixing  
5 of petroleum coke and coal tar pitch, in the case of Columbia  
6 Falls, the Soderberg; in the case of Sebree, the prebake.

7 "And so I would say I had several technical involvement  
8 with Sebree and Columbia Falls beyond spent potline."

9 MR. RAUCHWAY: Page 36, line 19.

10 Q "Okay. It looks like in 1983 you moved to Louisville,  
11 Kentucky; is that right?

12 A "That's correct, sir.

13 Q "Okay. How did that come about?

14 A "Two things had happened.

15 "I was finishing my MBA, so I had a newly-minted degree.  
16 And then Atlantic Richfield at that time, they used to  
17 advertise the positions in the company -- internal company --  
18 internal company job sites -- sites. And I was in technical  
19 area for a long time, I wanted to diversify into business  
20 area. And so business --

21 "So the job in Louisville was basic resource manager,  
22 where I would be dealing with the alumina refineries in -- in  
23 Jamaica and also alumina refineries in Aughinish. And so I  
24 would still be involved with Columbia Falls and Sebree because  
25 they were recipients of our alumina. But I would be involved

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1 with all of our plants on more of the business side as opposed  
2 to technology side; so that's the reason I --

3 "They actually -- they approached me in Louisville, Paul  
4 Belanger was my boss. I was approached and I applied and --  
5 and I was offered the job to move.

6 Q "Okay. And did the nature of that job change after you  
7 arrived in Louisville?

8 A "Yeah. The job was -- I dealt with the same,  
9 quote-unquote, players but different roles.

10 "My job in Anaconda Alumina Refinery was business type.  
11 I was the company rep, company rep representing Anaconda's  
12 interest in Alpart, which is a three-party consortium, and  
13 company rep in Aughinish, which was two-party, Alcan and  
14 Anaconda rep in -- in Ireland.

15 "And then whatever alumina was shipped from those two  
16 facilities, from Jamaica and to -- Aughinish, Ireland, to  
17 Sebree and Columbia Falls, I was the person that was involved  
18 in technical specifications of what can the refinery make and  
19 what's the best use of those alumina in the shelters in  
20 Columbia Falls and Sebree.

21 Q "Okay. There's a reference in your CV to 'divestiture  
22 activities' and specifically relating to two aluminum smelting  
23 plants, one of which was Columbia Falls.

24 "Can you tell us about that?

25 A "Yeah. The --

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1           "When I moved from Tucson, Arizona to Louisville,  
2 Kentucky in 1983, ARCO Aluminum -- ARCO Metal was up, up and  
3 up. They had a headquarters in Chicago. They just had  
4 commissioned a 2-billion-dollar aluminum rolling mill in -- in  
5 Russellville, Kentucky. It was a growing company with a lot  
6 of investment and hiring a lot of people.

7           "And then unbeknownst to us, and especially to me, being  
8 a young person there, in 1984 they decided that they want to  
9 divest the metals business; so when that happened, since I  
10 was -- I had experience in Sebree and Columbia Falls, and now  
11 experience in Jamaica and Aughinish, in addition to my regular  
12 responsibility I was asked by my supervisors at that time, you  
13 know, during the period of two years I worked for Paul  
14 Belanger, Vic Torasso and eventually for a long, long time,  
15 Mr. Marlan Boulttinghouse; so I was asked to look at the  
16 environmental and technical aspects of the plants that would  
17 be divested.

18 Q       "Are you familiar with the name Brack Duker?

19 A       "Yes, I am.

20 Q       "Who was Mr. Duker at this time?

21 A       "My best recollection is that Mr. Brack Duker was a  
22 high-level executive at Atlantic Richfield. I think he worked  
23 for Lara Cook, who was the CEO.

24           "And we used to see him, he used to come to -- he went to  
25 all the locations, including Louisville, Kentucky. And he

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1 would talk with the employees, assuring us that -- you know,  
2 don't jump the ship, we'll take care of you, we will --

3         "His main job was to sell ARCO's assets, the ARCO Metals  
4 assets, including copper assets and aluminum assets, including  
5 Columbia Falls. And -- and then he would come to the -- all  
6 the employees' meetings as a guest of my boss Marlan  
7 Boultinghouse and try to -- try to calm the employees down  
8 before they start leaving the company so -- so we can stay to  
9 finish the job.

10 Q         "All right. Was he the ARCO executive in charge of  
11 divesting the metals business, as best you understood at this  
12 time?

13 A         "Yes, he was."

14             MR. RAUCHWAY: Moving to page 41, line 1.

15 Q         "And this is a December 21, 1984 report, the subject of  
16 which is 'Due Diligence Review Report, Columbia Falls  
17 Operations.' And the Bates Number on the version that I'm  
18 looking at is CFAC11298.

19         "Do you have that in front of you, Dr. Das?

20 A         "Yes -- Yes, I do, Jon. I have it in front of me.

21 Q         "Okay. Have you seen this document before, Dr. Das?

22 A         "Yes, I have.

23 Q         "Are you familiar with this report?

24 A         "Yes, I am.

25 Q         "Who was D. L. Stieghan?

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1 A "I forget his last -- first name. I think it was Don but  
2 I'm not sure.

3 "He was the main environmental compliance person for  
4 Atlantic Richfield in LA. And I do not know his reporting  
5 relationship but his job at the time was that -- make sure all  
6 the Atlantic Richfield/ARCO facilities are under compliance.  
7 And then if some facilities are being sold, he was due -- he  
8 was in charge of the due diligence.

9 "And he worked for Wes Witten, and Wes Witten had a --  
10 had a C-level job, C-level job. He either was -- he either  
11 worked for Brack Duker, I'm not sure, or he was his  
12 contemporary.

13 "But to the best of my recollection, Don or -- I'm not  
14 sure his first name, Stieghan worked for Wes Witten. And Wes  
15 had authorized Don to do the due diligence before the sale of  
16 Columbia Falls.

17 Q "Okay. And you mentioned Wes Witten.

18 "If you look at the first sentence under 'Introduction'  
19 in this document there is a reference --

20 A "Yes, I see that.

21 Q "-- to W. M. Witten.

22 A "Yes. Yeah.

23 Q "Is that the same person you're talking about?

24 A "Yeah. Wes. Yeah. I remember his name distinctly. Wes  
25 Witten, yeah.

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1 Q "Okay. And according to Exhibit 71, Mr. Witten was part  
2 of the ARCO Metals divestiture team.

3 "Do you see that?

4 A "Correct. Correct.

5 Q "Is that the team that was led by Brack Duker?

6 A "That's my recollection.

7 Q "One of the persons to whom this memo is addressed is  
8 R.A. Sneddon of Columbia Falls, Montana.

9 "Do you see that reference?

10 A "Yes, I do.

11 Q "Who was Mr. Sneddon?

12 A "Bob Sneddon was a long-time plant manager at Columbia  
13 Falls Aluminum. I had the opportunity to meet with him many  
14 times, every visit I made to Columbia Falls and many times  
15 subsequent to -- to the sale.

16 Q "And looking at the list of CCs there's a couple in  
17 handwriting underneath the typed list. The first one looks  
18 like 'T. Payne.'

19 "Do you know who that is?

20 A "Yes. That's Tom Payne.

21 Q "Okay. Who was Mr. Payne?

22 A "Mr. Payne worked for Bob Sneddon at Columbia Falls  
23 Aluminum as a technical manager. And he had the environmental  
24 responsibility; so Don Ryan and other people's name who I've  
25 seen later on, they all worked for Tom Payne. He had the

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1 operations -- technology responsibility for operation,  
2 research and development, and the environmental. And he was  
3 my main contact when I visited Columbia Falls.

4 Q "And then you mentioned 'Don Ryan.'

5 A "Yes.

6 Q "Is that the 'D. Ryan' there?

7 A "Yes. Correct.

8 Q "What did you understand his role to be at the time?

9 A "He was the chief environmental supervisor that worked  
10 for Tom Payne. And his job was to supervise a team of  
11 inspectors and, you know, be aware of the issues, be they  
12 water or solid or air or human safety or health, at the  
13 Columbia Falls plant.

14 Q "Please turn to the last page of the Due Diligence  
15 Report, Exhibit 71.

16 A "Yes, I have that.

17 "Page number 6 you're referring to, Jon?

18 Q "Yes. It's page 6 --

19 A "Yes, I have that. Yes, I have that.

20 Q "There are a couple of paragraphs -- it looks like there  
21 are four paragraphs at the end that begins with discussion of  
22 an onsite drum storage area.

23 "Can you take a moment please to read those four  
24 paragraphs? I'd like to ask you a couple questions about that  
25 portion of the report.

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1 A "Sure.

2 "Yes, I've read it.

3 Q "Okay. The first paragraph refers to 'two on-site  
4 landfills,' one of which contains nonhazardous wastes and the  
5 other one of which contains spent cathode.

6 "Do you see that reference?

7 A "Yes, I do.

8 Q "What is 'spent cathode'?

9 A "During the electrolysis process where alumina that comes  
10 from, say, Alpart, Aughinish, is dissolved in the cryolite.  
11 Cryolite is also known to scientists as universal solvent, it  
12 dissolves everything. And there was a patent by Hall-Heroult  
13 process.

14 "So you dissolve the alumina in -- at 970 Celsius in a  
15 cryolite bath. And when the bath is liquid then you have high  
16 current, like 130 kiloamps. And by passing the current it --  
17 it opens up the chemical molecule of aluminum oxide and oxygen  
18 goes to anode, where it burns off, and the alumina comes to  
19 the cathode. And the cathode is made of mostly graphite  
20 material, which is very porous.

21 "And during the process of the electrolysis, lasting  
22 maybe five to six years, the pores of the graphite are filled  
23 with the electrolyte, cryolite or -- or sodium fluoride or  
24 aluminum fluoride. And because of high temperature, it forms  
25 toxic components such as the multiple compounds of carbon or

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1 nitrogen.

2       "And so when the pores are filled with salt, it's short;  
3 that means the current is not passing from anode to cathode  
4 that's required to make aluminum. It goes directly from anode  
5 to cathode without passing electrolyte and that overheats the  
6 cathode and failure occurs.

7       "So when failure occurs, what it fill in the capsule is  
8 called 'spent,' that's the term you used, SPL, potline.

9 Q       "Okay. So is 'spent cathode' another term for --

10 A       "Yes.

11 Q       "-- 'spent potliner'?

12 A       "Correct.

13 Q       "Okay. Those terms are synonymous?

14 A       "They are.

15 Q       "Have you also heard the term 'pot diggings' before?

16 A       "Yes.

17 Q       "Is that the same thing or is that something different?

18 A       "A pot digging is a -- is -- when you dig the pot, you  
19 know, what comes out is --

20       "Spent potline is a whole mess that stays in the (pot).  
21 And when you dig things out from a (pot) mass to smaller  
22 particles, that's called pot digging.

23       "Yeah. Technically they are the same thing, it's just a  
24 different stage of the operation. When -- when -- spent  
25 potline is generic. And digging is when you take it out to

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1 remove that from the cathode to -- to fill it or to remove it.

2 Q "And you referred a moment ago to some toxic compounds  
3 that would form in the -- in the cathode.

4 "Is cyanide one of the things that could form there --

5 A "Yes.

6 Q "-- in the process?

7 A "Yes, yes, sir. Yes, sir."

8 THE COURT: Why don't we take the morning break.

9 We'll be in recess until 10:15.

10 (Recess taken from 09:59:45 to 10:14:49.)

11 (Open court.)

12 THE COURT: Resume with the deposition.

13 MR. RAUCHWAY: Resuming, page 48, line 9.

14 BY MR. RAUCHWAY:

15 Q "Now, in the aluminum reduction process, does cyanide  
16 form in the cryolite or the pot diggings or only in the -- the  
17 cathode carbon?

18 A "Cyanide is formed while you're operating the  
19 electrolysis. When the pot has filled, then obviously the  
20 cyanide generation ceases because the temperature is not  
21 there; so cyanide is already formed before the pot has filled  
22 and you dig the pot out.

23 Q "Okay. So if you're digging the pot out and you have,  
24 you know, the pot diggings, the cryolite, the -- the spent  
25 potliner, all of that is, you know, a mass of waste, would you

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1 expect to find cyanide in all of those portions of the waste?

2 A "Yes. As long as there is salt or porosity, the cyanide  
3 compound can be find -- can be found either in the carbon or  
4 in the -- any part of it, you're correct.

5 Q "Okay. Looking back at Exhibit 71 in that same paragraph  
6 we were talking about, according to this report those two  
7 landfills, one that contains spent cathode and one that just  
8 contained nonhazardous sanitary wastes, those were both active  
9 at the time.

10 "Does that accord with your recollection, that at this  
11 time the Columbia Falls site had two active landfills?

12 A "That is correct.

13 Q "And are you familiar with those two features at the site  
14 that are described in Exhibit 71, the -- the active, back in  
15 December of 1984, spent cathode landfill and the sanitary  
16 landfill?

17 A "Correct. That was standard practice.

18 Q "All right. Now, the next paragraph of this report also  
19 refers to 'three closed landfills' at the site.

20 "Were you familiar with those site features as well?

21 A "Yes, I was.

22 Q "And then the following paragraph refers to 'an open, but  
23 inactive, calcium fluoride sludge pond.'

24 "Are you familiar with that feature?

25 A "Yes.

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1 Q "Can you tell us what you remember about that?

2 A "The calcium fluoride is a salt so -- and it's not  
3 hazardous, it's actually very valuable; so there was a  
4 separate pond for that with the hope to maybe reclaim some of  
5 the calcium fluoride as time goes on.

6 Q "Okay. And was that pond also referred to as the 'wet  
7 scrubber sludge pond'?

8 A "I'm not -- I'm not sure about that. It could have been.  
9 "Columbia Falls had the wet scrubber for a while, then  
10 they acquired a Sumitomo technology and they went -- went to  
11 dry scrubber; so I'm not sure about that part, Mr. Rauchway.

12 Q "Okay. But regardless of what -- how this pond may have  
13 been referred to, is it your understanding that it received  
14 the waste from the wet scrubber process?

15 A "Yes. That was standard because wet scrubber sludge  
16 waste also has a fluoride-like compound and that's not  
17 hazardous and actually is valuable.

18 "Yes, correct."

19 MR. RAUCHWAY: Moving to page 52, line 16.

20 Q "At some point did you become the environmental manager  
21 for ARCO Aluminum properties?

22 A "I did become that when I went to Louisville, Kentucky  
23 and when the -- before the divestiture. And after the  
24 divestiture, until '93, we didn't have Columbia Falls and we  
25 didn't have Sebree. But I was the only technically trained

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1 person with a background; so, yes, I would say I acted in that  
2 role, correct.

3 Q "Okay. And when did that begin? Was that sometime in  
4 1985 or was it before that?

5 A "Yeah. It -- yeah. I would say --

6 "When I moved to Louisville in '83, you know, my  
7 responsibility was basically alumina plant in Aughinish and  
8 Jamaica and helping the smelter. And -- and I was not working  
9 on the landfill project because that was research project left  
10 over at Tucson, Arizona.

11 "And then when the sale was announced and -- and, you  
12 know, most people were leaving, and I was the other person  
13 with technical and environmental background with -- with  
14 experience at Columbia Falls; so my job description, or as  
15 described by my boss, my verbal job description was that,  
16 'Hey, Das, you're also going to handle the environmental  
17 aspects of Columbia Falls.'

18 Q "Okay. So just trying to, you know, put that on the  
19 timeline, did you assume that role, and 'that role' being  
20 manager of environmental issues at ARCO Aluminum plants, would  
21 that have been the beginning of 1985, thereabouts?

22 A "Yeah. Whenever the rumor started or conversation  
23 started that ARCO Metals was going to be sold. And as a role  
24 of my technical --

25 "I was technical manager; the environmental aspects, I

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1 was also asked to handle those.

2 Q "All right.

3 A "'85. I don't -- don't remember the exact timeframe but  
4 I had just been in Louisville in '83; so maybe a year later or  
5 a year and a half later.

6 Q "All right. Okay. The subject of Exhibit 72, this  
7 April 10, 1985 memo to Mr. Ryan, is the 'Hazardous Waste  
8 Landfill' at the Columbia Falls Site, right?

9 A "Correct.

10 Q "Now, is that the same landfill that's referred to as one  
11 of the two active landfills in the previous exhibit, 71, the  
12 Due Diligence Report?

13 A "Correct.

14 Q "This is the active landfill for the disposal of spent  
15 cathode, right?

16 A "Correct."

17 MR. RAUCHWAY: Page 56, line 7.

18 Q "Okay. And then continuing into the third paragraph it  
19 talks about how those pipes drained leachate from the waste  
20 dump into a lined pond. And the last sentence there says 'It  
21 discharges into the lined pond and evaporates.'

22 "Do you see that reference?

23 A "Yes, I do.

24 Q "All right. Does that sit with your recollection of how  
25 the leachate was disposed of when ARCO operated the site?

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1 A "Yes."

2 MR. RAUCHWAY: Page 58, line 8.

3 Q "With respect to the -- the leachate that came out of the  
4 waste dump, are you aware of any instance of ARCO piping or  
5 dumping untreated leachate into other areas of the site?

6 A "I'm not aware of that action.

7 Q "Let's go back to -- let's go back to Exhibit 71 for a  
8 moment.

9 A "Which is September 25th --

10 Q "The December 20 (sic), 1984 Due Diligence Report.

11 A "Okay. Let me bring it back.

12 "Yeah. I -- I've got it here. Yeah, from Mr. Stieghan.

13 "Yes, I have it.

14 Q "Yes. So let me ask you about the -- the objectives of  
15 this report.

16 "There's a couple of enumerated items on the first page  
17 under the 'Introduction.'

18 A "Yes. Yeah, I see that.

19 Q "Okay. Let me just ask you generally.

20 "Was the purpose of this report to evaluate the site in  
21 preparation for a potential sale to a third-party buyer?

22 A "Yes, it was."

23 MR. RAUCHWAY: Line 22.

24 Q "Okay. And let me just make sure I got that question  
25 out. It was 'Was this an internal report prepared by the ARCO

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1 divestiture team?"

2 A "This is correct.

3 Q "Did you learn about any interest by prospective  
4 purchasers of the Columbia Falls plant during your role as  
5 part of the divestiture work there?

6 A "Yes, I (did).

7 "When I moved from -- from Tucson, Arizona to Louisville,  
8 Kentucky and then divestiture team started in, you know, late  
9 1984, I was still responsible, as in managing my craft, to  
10 Anaconda joint venture in Jamaica, which is Reynolds and  
11 Kaiser. And Anaconda's joint venture with Alcan -- in  
12 Aughinish, Ireland with Alcan.

13 "And during my visits to Jamaica plant, which I went  
14 quite often for the meetings and all that, it was brought up  
15 to my attention in meetings that both Reynolds and Kaiser were  
16 quite -- quite interested in being considered as potential  
17 buyers for the Columbia Falls plant for several reasons.

18 "Yes. I was very -- I was made aware of that in meetings  
19 and conversations in Louisville, Kentucky and also in Jamaica.

20 Q "And were those companies dealing with Mr. Duker at that  
21 point as the point of contact for a potential purchase of the  
22 site?

23 A "I had no direct contact with Mr. Brack Duker.

24 "My main contact was my supervisor, my boss, Marlan  
25 Boultinghouse. And when I would find out during my visits to

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1 Jamaica plant that -- you know, people approached me saying  
2 that, 'Hey, we're interested in buying the facility, who  
3 should we talk'; so I would report back to Mr. Boultinghouse  
4 and he will call Mr. Brack Duker.

5 "And I was in the room when the call happened, although I  
6 didn't participate in the conversation; so Marlan  
7 Boultinghouse would say to Mr. Duker that, 'By the way, ' you  
8 know, 'we have inquiry from Reynolds and Kaiser to buy the  
9 plant for the obvious reasons that they're already partners,  
10 they're supplying alumina to the facilities, they are both  
11 Pacific Northwest' -- 'Northwest.'

12 "And -- and aluminum prices at that time was rising  
13 rapidly in a cyclical market; so my job --

14 "I learned that in my meetings with Reynolds and Kaiser,  
15 I relate it to my boss/supervisor and he will call me into the  
16 office and call Brack Duker and inform him; so I've heard the  
17 conversation between Mr. Brack Duker and Marlan Boultinghouse.

18 Q "And how did those discussions, and when I say 'those  
19 discussions' I mean discussions by Kaiser or Reynolds to  
20 potentially purchase the Columbia Falls site, how did those  
21 discussions end up?

22 A "I --

23 "My -- my role was to hear what I was told in my meetings  
24 with Reynolds and Kaiser and relate that to -- to my  
25 supervisor, Boultinghouse, and he will call Brack Duker and I

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1 was listening during. What transpired after the initial  
2 conversation where I was a listener -- listening mode with  
3 Boultonghouse talking to Brack Duker, I have no knowledge what  
4 transpired after that.

5 Q "Do you know who ultimately ended up buying the Columbia  
6 Falls Aluminum plant?

7 A "Yeah. I -- I was quite involved in the announcement  
8 and --

9 "Yeah. It's the Columbia Falls Aluminum Company owned by  
10 Mr. Brack Duker who (changed from) selling the property to  
11 buying the property for one dollar. It's a very favorable  
12 alumina deal from Alumax and from Alpart from Aughinish.

13 "And also he -- he hired Mr. Jerry Broussard, who was the  
14 plant manager at -- in Jamaica. I know -- I knew both of  
15 them; so that's what --

16 "You know, it was public information that was relayed by  
17 quick visit that Mr. Brack Duker make to our Louisville  
18 offices and it was discussed openly that Mr. Brack Duker  
19 formed a new company, Columbia Falls Aluminum, and he bought  
20 the facility for one dollar.

21 Q "Did you learn of anything that Mr. Duker did to  
22 discourage the sale of a plant to a third-party buyer when he  
23 was the person at ARCO in charge of divestiture?

24 A "I had no direct conversation with Brack Duker.

25 "I worked for Boultonghouse. And any time he would talk

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1 to Brack Duker --

2        "The aluminum smelting plants, Columbia Falls and Sebree,  
3 and refineries all reported to Marlan Boultinghouse, I worked  
4 for him. Any time he would have discussion with Brack Duker  
5 he would call me. My office was two doors from him; so he  
6 will call me in and I will be on the speakerphone during the  
7 conversation.

8        "And many times I remember that Marlan is trying to  
9 convince Mr. Duker that these are aluminum people, Reynolds  
10 and Kaiser, they want to buy the facility because they have  
11 the power structure, the electricity power, the monitor power,  
12 they're treating your spent potline, they're partners at  
13 Alpart Alumina.

14        "And many times I heard -- it would end up in a -- in  
15 argumentation saying that -- Marlan would say 'Why won't you  
16 sell that to Reynolds and Kaiser?'

17        "And Brack Duker would say 'Well, this is my call.'

18        "Again, I'm in listening mode. And Marlan had a practice  
19 of inviting me to all conversations that he had as a listener  
20 of the conversation with Brack Duker.

21 Q        "From those conversations that you were listening in to,  
22 did you get the impression that Mr. Duker was attempting to  
23 discourage a sale to a third-party buyer so that he could buy  
24 the property himself?

25 A        "It was very evident by listening to me and, you know,

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1 there were a lot of conversations on the floor, on the 26th  
2 floor of the tower where our office was, to that effect, that  
3 Mr. Duker has (changed) from seller to buyer and he is trying  
4 to buy for -- getting -- getting an extremely good deal in  
5 alumina and buying it for one dollar, although they are viable  
6 buyers, Reynolds and Kaiser. At that time, Glencore was also  
7 very interested in buying.

8 "And these things I remember because they were openly  
9 discussed to the staff by Marlan Boultinghouse. And sometimes  
10 when Brack Duker will come to town, they will have a -- like a  
11 town hall meeting and they'll have this conversation.

12 "So three names came out pretty clearly, Reynolds and  
13 Kaiser and Glencore.

14 Q "Okay. You've mentioned a couple of times that Mr. Duker  
15 ultimately bought the site for a dollar.

16 "Are you aware that Mr. Duker's group on the one hand and  
17 ARCO on the other hand entered into an Acquisition Agreement  
18 to effect that sale?

19 A "Yes, I'm aware of that.

20 Q "Did you have any involvement in the negotiations of that  
21 Acquisition Agreement?

22 A "No, I did not."

23 MR. RAUCHWAY: Moving to page 66, line 13.

24 Q "Okay, Dr. Das. I have a few more questions about  
25 Exhibits 71 and 72 before we move on.

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1           "On that last page, page 6 of the December 21, 1984 Due  
2 Diligence Report, there is a sentence at the end of the  
3 paragraph in about the middle of the page that says 'The spent  
4 cathode landfill was constructed in late 1980 in accordance  
5 with the then-effective RCRA land disposal standards.'

6           "Do you see that reference?

7 A       "Yes, I do.

8 Q       "Can you tell us what your understanding of that was and  
9 how it changed the requirements for construction of SPL  
10 landfills?

11 A       "I don't remember the exact date but prior to this act,  
12 RCRA act, it was not mandatory for the aluminum companies to  
13 store the spent potline in a lined and prescribed construction  
14 landfill; so RCRA act required that that be done.

15           "And so that's why it refers to that in 1980 the -- the  
16 landfill that -- that Columbia Falls had was lined with proper  
17 monitoring of -- to follow the RCRA act that was enacted to  
18 make sure that it's not just, you know, landfilled in an  
19 unmonitored and unlined landfill.

20 Q       "Okay. So the -- the features that are described in  
21 Exhibit 72, the April 10, 1985 Overview of Hazardous Waste  
22 Landfill, are those all of the enhanced landfill features that  
23 were required when these new regulations came into place?

24 A       "That is correct.

25 Q       "Okay. Was it standard practice in the aluminum industry

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1 to dispose of spent potliner in unlined landfills prior to  
2 1980 or so when the RCRA regulations went into place?

3 A "It is correct, correct statement."

4 MR. RAUCHWAY: Page 68, line 8.

5 Q "Do you have that one, Dr. Das?"

6 A "Yes, I do. Yes, I do, Mr. Rauchway."

7 Q "Now, it appears to me that this Exhibit 73 is your  
8 review of the previous Due Diligence Report from December of  
9 1984; is that right?"

10 A "Correct.

11 Q "Okay. How did it come about that you decided to take  
12 another look at that Due Diligence Report?"

13 A "Okay. The Due Diligence Report that you referred to,  
14 21st of January (sic), 1984, that was done prior to the sale  
15 of the facilities to Columbia Falls Aluminum Company. And  
16 that was done by Stieghan -- Mr. Stieghan with the -- with the  
17 relationship with Wes Witten and Brack Duker before the sale  
18 happen.

19 "Now my report -- at that time I worked -- I reported to  
20 Dr. -- to Mr. Boultinghouse and my -- he was the president of  
21 the company, of ARCO Aluminum; so after the sale happened then  
22 basically it fell upon Mr. Boultinghouse's responsibility  
23 to -- to keep track of Columbia Falls for the five-year --  
24 five-year period from 1985 to 1990 where ARCO still had the  
25 responsibility."

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1 MR. RAUCHWAY: Page 71, line 12.

2 Q "Okay. As part of your review project of the  
3 December 1984 Due Diligence Report, did you also review the --  
4 the groundwater monitoring data from the site?

5 A "Yeah, I --

6 "My recollection is that I talked to Bob Sneddon quite  
7 extensively. And he may come to Louisville, Kentucky to visit  
8 us. He was no longer part of ARCO or Columbia Falls. And --  
9 and then he made available to me whatever information he had  
10 on the -- you know, the water monitoring system and -- his  
11 best understanding of the situation. And based upon my  
12 conversations and my learning from Jack Goldman report was  
13 written based upon that learning and assessment.

14 Q "Did you review the groundwater data yourself at that  
15 time?

16 A "My recollection is I think I did. That's a long time.  
17 I did.

18 "I think Bob Sneddon probably showed me some documents  
19 that he had or referred to me, I don't remember exact  
20 location. And I do remember that I reviewed the groundwater  
21 situation and then, you know -- and it was monitoring  
22 efficiently. And -- and then, to the best of my recollection,  
23 they were under the compliance by the Montana EPA.

24 Q "So if you look at your memo under item 10, the 'Spent  
25 Cathode Landfills' --

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1 A "Yes, I see that.

2 Q "-- you have a reference there that 'The regular sampling  
3 of well water from the 2 closed landfills containing spent  
4 cathode...indicate no environmental problems."

5 "And that was the assessment that you reported to your  
6 supervisor, Mr. Boultinghouse?

7 A "Yes, I did.

8 Q "And the purpose of that assessment was to evaluate  
9 ARCO's potential liability in that five-year period of  
10 indemnity; is that correct?

11 A "That is correct.

12 Q "And this was an internal assessment, this was not  
13 something that was shared outside of the company?

14 A "No. It was internal, yes."

15 MR. RAUCHWAY: Page 74, line 16.

16 Q "And did you conclude, after you completed this project  
17 in May of 1986, that the Columbia Falls site was  
18 environmentally compliant as of that time?

19 A "I did.

20 Q "Let me show you another document that was previously  
21 marked by CFAC in one of the prior depositions. It's  
22 Exhibit 20; so we don't need to mark it again.

23 "But Dr. Das, you should have it there. It's an  
24 April 13, 1988 memo from Mr. Ryan again, this time to a  
25 Mr. Lucas at the Atlantic Richfield Company.

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1 A "I have it."

2 MR. RAUCHWAY: Line ten.

3 Q "Okay. First of all, I think we've seen Mr. Ryan before.

4 A "Yes.

5 Q "He was the environmental person that you identified in  
6 response to previous questions?

7 A "Yes. He worked for Tom Payne. He was either the  
8 laboratory superintendent or environmental superintendent.

9 Q "Okay. And Mr. Ryan had previously worked for ARCO,  
10 right?

11 A "Correct.

12 Q "But at this time, April of 1988, he's now working for  
13 Columbia Falls Aluminum Company, right?

14 A "Correct.

15 Q "All right. And then there are some CCs on this letter,  
16 too; the first one is Mr. Duker.

17 "We've discussed him already, right?

18 A "Yes.

19 Q "And then J. T. Broussard. Is that the -- the new --

20 A "Jerry Broussard.

21 Q "Yes.

22 "That's the CFAC plant manager who took over for  
23 Mr. Sneddon?

24 A "Correct.

25 Q "Okay. And then the last person there, is that Tom

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1 Payne?

2 A "Correct.

3 Q "All right. So Mr. Ryan here writes, on behalf of CFAC,  
4 that 'During the period that ARCO operated this plant, their  
5 commitment was to provide occupational health and  
6 environmental programs which were more than just the minimum  
7 necessary to avoid regulatory violations.'

8 "Do you agree with that statement?

9 A "I do.

10 Q "And then in the next sentence he writes 'This was  
11 evidenced by their safety, health and environmental audits and  
12 due diligence reviews.'

13 "Do you agree with that statement?

14 A "Yes, I do."

15 MR. RAUCHWAY: Page 77, line 18.

16 Q "Okay. We've looked at the December 1984 Due Diligence  
17 Report and we've looked at your report from May of 1986.

18 "Did there come a time when there was a third occasion to  
19 evaluate ARCO's environmental practices at the Columbia Falls  
20 site?

21 A "The best way to respond to that is during my tenure  
22 working for Mr. Boultinghouse and after the plant was sold in  
23 1985, we knew -- everybody knew that there's a five-year  
24 period where ARCO would be responsible for -- for the  
25 environmental aspects of it.

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1           "And what I learned talking to Marlan --  
2 Mr. Boultinghouse quite frequently, many times, that he fully  
3 expected or afraid that the new owners will somehow not take  
4 that five-year responsibility -- even though -- even though  
5 they understood it, they would not take the five-year  
6 responsibility seriously and find the holes so that make ARCO  
7 responsible for the environmental issues after 1990. It was  
8 understood by my conversations with Marlan and -- and people  
9 at -- in Louisville.

10          "So Marlan was especially very cautious and careful and  
11 kept pushing me to keep updated with the environmental  
12 regulations and all that. And so we -- people at Louisville  
13 fully expected that the commitment made by Mr. Brack Duker  
14 would not be honored and will come back to us for things that  
15 he already agreed to.

16          "And so I was asked by Marlan Boultinghouse to stay in  
17 touch with Bob Sneddon. And Bob Sneddon, after retirement I  
18 think he had partly moved to Hawaii for some -- for some  
19 months; so I would have occasional calls with Bob Sneddon.  
20 And actually Mr. Boultinghouse directed me to hire Bob Sneddon  
21 as -- as ARCO's consultant, which I did, I think this was  
22 198- -- '88 or '89, just before the -- just before the  
23 five-year period expired.

24          "And I -- he asked me to talk to Bob and ask Bob to write  
25 copious notes of his recollection and facts and figures and

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1 diagrams and all that, which he did at my request, and these  
2 were all handwritten at that time.

3 "And then around the five-year period Marlan asked me  
4 to -- to work with Bob and the specific four questions that  
5 listed on the March 8th memo to Bob Sneddon, the '1, 2, 3, 4,'  
6 you may (have seen it); so I was --

7 Q "Let me just stop you a second, Dr. Das, and why don't we  
8 just mark that memo since you just referred to it. And I  
9 think -- I've lost track.

10 "Are we on 74 now?

11 "Okay. So let's mark as Exhibit 74 Dr. Das's March 8,  
12 1990 memo -- or letter to Mr. Sneddon and bearing the Bates  
13 Number ARC-14895.

14 "So you referred to -- to four questions.

15 "Let me just ask you, are those the four questions, 1  
16 through 4, that appear on this letter?

17 A "Correct.

18 Q "Okay. Who -- who posed those questions? Were those  
19 yours or somebody else's?

20 A "Those questions were discussed with me by my supervisor,  
21 Mr. Marlan Boultinghouse. And he dictated them -- those  
22 questions to me. And he said 'Please hire Bob Sneddon and  
23 work with him,' and spend whatever time you need either for  
24 Bob to come to Louisville, Kentucky or invite Bob to  
25 Washington DC for Aluminum Association meeting. And have Bob

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1 write his recollections and -- which he did in many  
2 handwritten reports, which I have summarized later on.

3 "So those questions were given to me by Boultinghouse. I  
4 was the person in charge but I did that at the direction of my  
5 supervisor, the president of ARCO Aluminum, Mr. Marlan  
6 Boultinghouse.

7 Q "Okay. Did you and Mr. Sneddon ultimately write a report  
8 to respond to those four questions that Mr. Boultinghouse  
9 articulated?

10 A "Yes, I did. And that's written on May -- May 1990,  
11 about three months after the March letter.

12 Q "Okay. Why don't we just go ahead and mark that too.

13 "This will be Exhibit 75. The first page is handwritten  
14 and it's entitled 'A Management Review of Potline Waste  
15 Disposal Issues at Columbia Falls by S.K. Das and R. Sneddon.'  
16 It has a Bates Number ARC-15957.

17 "So to make sure we're all talking about the same page,  
18 is Exhibit 75 the report that you and Mr. Sneddon generated as  
19 a result of the assignment that is outlined in Exhibit 74, the  
20 March 8, 1990 letter?

21 A "Correct."

22 MR. RAUCHWAY: Moving to page 83, line 20.

23 Q "Okay. When -- when you and Mr. Sneddon were undertaking  
24 your investigation to prepare this report that we've marked as  
25 Exhibit 75, did you go back and pull the 1984 Due Diligence

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1 Report and your 1986 review of that report?

2 A "Yes, I did. It was very extensive work that Bob and I  
3 did. And -- and I was -- I was told by Mr. Boultonghouse that  
4 this is my major responsibility for maybe three months, though  
5 I don't recall the time frame.

6 "So we studied -- bob and I who -- I think he came twice  
7 but each time he definitely came for four or five days; so  
8 we -- both of us would review his handwritten notes and  
9 whatever we had in the files.

10 "So this was done with -- with a huge amount of time  
11 and -- and -- and thoughts that went into this report.

12 Q "In the process of producing the report we've marked as  
13 Exhibit 75, did you and Mr. Sneddon go back and look at the  
14 groundwater testing data that was referenced in the previous  
15 diligence reports?

16 A "Yes, I did."

17 MR. RAUCHWAY: Moving to page 87, line 9.

18 Q "What you and Mr. Sneddon were being asked to assess  
19 there was those practices by ARCO when they were operating the  
20 site prior to September 1985, right?

21 A "Correct.

22 Q "And what did you conclude?

23 A "Bob Sneddon and I both concluded, and my data came from  
24 Bob, is at the time of sale to Columbia Falls Aluminum, ARCO  
25 was in complete compliance with the then-required restrictions

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1 or expectations of the spent potline, supported by the  
2 monitoring of the groundwater and effluent and whatever was  
3 required by the Montana EPA."

4 MR. RAUCHWAY: Page 88, line 12.

5 Q "Okay. Dr. Das --

6 A "Yes, Jon.

7 Q "-- let me ask you a couple questions about Exhibit 75,  
8 the report by you and Mr. Sneddon.

9 "Do you have that in front of you?

10 A "Yes. May 1990. Yes, I do have that.

11 Q "Let me start here.

12 "As far as you can remember, is this the final version of  
13 this report?

14 A "Yes, I do. It's the final version, correct.

15 Q "Okay. And was this report disseminated outside of the  
16 company or was this just for internal use?

17 A "Best of my recollection was -- is that I wrote this  
18 report with Bob Sneddon for Marlan Boultinghouse and he  
19 forwarded that to the new person at ARCO -- at Atlantic  
20 Richfield in Los Angeles and my recollection was that that  
21 person was Floyd George.

22 Q "Could you turn to the section of the report under  
23 'CURRENT ISSUES'?

24 A "Yes, I do -- I see that.

25 Q "Okay. There's a paragraph at the bottom of the page

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1 that says 'Compliance inspection is not very stringent in  
2 Montana; however, compliance is necessary for both state and  
3 federal standards.'

4 "What did you mean by that?

5 A "My recollection -- my recollection is that every state  
6 was different at that time and in the State of Montana the  
7 inspection system was not as rigorous as other states' as it  
8 could have been; although, you know, it was our responsibility  
9 to -- to follow the compliance as -- as agreed or stipulated  
10 by both State and Federal standards.

11 Q "And then there's another section on the following page  
12 under subpart (b), 'Common industry practices' --

13 A "Yeah.

14 Q "-- where it says 'Landfilling of hazardous waste has  
15 been the common practice by most aluminum plants in the United  
16 States.' And it goes on to say 'this procedure can no longer  
17 be used.'

18 "Do you see that language?

19 A "Yes, I do.

20 Q "Can you explain that a little bit?

21 A "Before the RCRA act landfilling was not listed; so  
22 the --

23 "So that's pretty common practice in the aluminum  
24 industry before that act came, I think it's 1980, I don't have  
25 exact recollection of the date, that, you know, it was filled

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1   in a hazardous -- it was not hazardous waste, landfilling was  
2   not restricted; so what RCRA -- when RCRA act was passed then  
3   the old procedures can never -- cannot be used anymore.

4           "So landfilling was allowed but it had to be landfilled  
5   in a prescribed construction manner and had to be -- and had  
6   to be monitored continuously because there was rumblings at  
7   that time that by 1988 it will be relisted as a hazardous  
8   waste; so the winds were changing in terms of being relisted  
9   and more stringent landfilling and monitoring.

10 Q       "Okay. On the next page there is two headings, 'ARCO  
11      Strategy' and 'Action Items.'

12           "Do you see those?

13 A       "Yes, I do.

14 Q       "All right. And under both headings there's a reference  
15      to the date 'August 31, 1990.'

16           "What was your understanding of the significance of that  
17      date?

18 A       "Significance -- significance of that date is that the  
19      five years where ARCO's responsibility -- ARCO did not have  
20      any responsibilities of Columbia Falls' plant five years after  
21      the sale.

22           "I think the sale happened September somewhere --  
23      September 1st, if I recollect, of 1985; so that's five years.  
24      So that's -- that's why it's a very significant date that --  
25      you know, that ARCO's responsibility is no longer with ARCO,

*DAS DIRECT EXAMINATION BY RAUCHWAY*

1 it is -- rests -- it rests entirely with Columbia Falls  
2 Aluminum Company.

3 Q "Was it your understanding back when you wrote this memo  
4 that after August 31, 1990, Columbia Falls could not make any  
5 additional claim against ARCO for environmental conditions at  
6 the Columbia Falls site?

7 A "It was my understanding, it was very well understood by  
8 management of ARCO and also was very well understood by --

9 "By 1984, 1985 when the sale happened, it was very well  
10 understood by Mr. Brack Duker because he was selling the  
11 plant; then he became the buyer; so it was commonly understood  
12 and widely recognized that five-year period is when the  
13 responsibility ends.

14 Q "76. So it is 76 and it is a July 21, 1993 memo from you  
15 to Mr. George. And I guess this is the benefit for only  
16 having about a dozen exhibits or so.

17 "Can you tell me the -- the circumstances that led you to  
18 prepare this memo that you sent to Mr. George?

19 A "Okay. This, again, was done at the directive of  
20 Mr. Marlan Boultonghouse, supervisor -- my supervisor and the  
21 president of ARCO Aluminum. And this was done to follow up  
22 what I wrote in 1990, you know, after the five-year period had  
23 expired and then the --

24 "It was relisted, SPL, as a hazardous waste in, I think,  
25 '88 and it was required to be -- here to even 1991. And

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1 Mr. Boultinghouse at that time fully expected that the new  
2 owners of Columbia Falls will -- will -- will not honor the  
3 agreement that they made of five years. And it was my job,  
4 based upon Mr. Boultinghouse, to prepare these transparencies  
5 at the time.

6 "And Mr. Floyd George came to Louisville, Kentucky and we  
7 made the presentation to Mr. -- I made the presentation to  
8 Mr. Floyd George as an audience and Mr. Boultinghouse as an  
9 audience. And my job was to -- to educate Mr. Floyd George  
10 about the Columbia Falls situation, the technology and  
11 management and -- and whatever I -- I had and hand over all  
12 the files that I had with me.

13 "So officially, I made a presentation. I gave him a  
14 management approach and gave him -- physically gave him  
15 whatever files I had in my possession at the direction of  
16 Boultinghouse to Mr. Floyd George.

17 Q "So after that presentation in July of 1993 or so, did  
18 you have any further involvement with the Columbia Falls site?

19 A "I did not."

20 MR. LAUER: (Standing.)

21 THE COURT: Is there an objection?

22 MR. LAUER: No. I think Mr. Rauchway wanted me to  
23 read our portion, unless he wants to read it.

24 MR. RAUCHWAY: No. My -- that's the end of my  
25 portion. I think the agreement was you would read your

DAS CROSS-EXAMINATION BY LAUER

1 designations, and then there's a very short redirect at the  
2 end that I'll finish with.

3 THE COURT: All right.

4 CROSS-EXAMINATION

5 BY MR. LAUER:

6 Q "Let's continue for a moment here about the transfer of  
7 the site from ARCO to CFAC, the company that became CFAC.

8 "So, first of all, you testified that you were not  
9 involved with the negotiations for the acquisition; is that  
10 right?

11 A "That is correct.

12 Q "Have you read the Acquisition Agreement?

13 A "Yes, I have.

14 Q "You testified that there was some interest from  
15 potential buyers, and I believe you named Reynolds and Kaiser  
16 and Glencore as possible buyers at the time?

17 A "Correct.

18 Q "Did I remember that right?

19 A "Yes, I do.

20 Q "Do you know if any of those three made actual offers?

21 A "I have no direct knowledge of that because I was not  
22 involved in any negotiations; so I -- all I remember is that  
23 based upon the conversations that Mr. Brack Duker had with  
24 Boultinghouse and I was in listening mode that -- that  
25 Mr. Brack Duker heavily discouraged Mr. Boultinghouse to sell

DAS CROSS-EXAMINATION BY LAUER

1 the plant to Kaiser or Reynolds. And almost to a shouting  
2 match that I remember on the telephone.

3 "But I have no recollection of what transpired and what  
4 offers were made. I was not privy to that conversation.

5 Q "So you were not aware of offers by anyone other than  
6 Mr. Duker to buy the site?

7 A "Yes, that is correct. Your statement is correct."

8 MR. LAUER: Page 101, line 7.

9 Q "So you don't have any knowledge as to -- as to anything  
10 Duker may have done to discourage the sale to any other  
11 prospective buyer?

12 A "I have no knowledge of what Mr. Duker did.

13 "My only interactions with Mr. Duker was that when I  
14 heard him talk to Mr. Boultinghouse and when he came to talk  
15 to the employees in Louisville, his intention saying that the  
16 plant cannot shut down, they have to find a way to sell the  
17 plant so that the employees can keep their jobs. That's the  
18 only thing I heard from Mr. Duker, which was stated policy of  
19 Atlantic Richfield."

20 MR. LAUER: Going to line 25.

21 Q "Was that the tolling provision of the agreement?

22 A "I'm not 100 percent sure. My recollection of whatever  
23 Mr. Duker did or whatever Mr. Duker did not do was entirely  
24 based upon my learning from hearing Mr. Boultinghouse talk to  
25 him about that. I do not have a knowledge of what business

DAS CROSS-EXAMINATION BY LAUER

1 arrangement Mr. Duker made or not made."

2 MR. LAUER: Going to line 19.

3 Q "Do you know if -- if the board had to approve the sale?

4 A "I -- I would assume so but I have no direct knowledge of  
5 that.

6 Q "Do you have any direct knowledge of who did play a role  
7 in approving the sale on the ARCO side?

8 A "I have --

9 "I do not have any knowledge of who approved that.

10 Q "Okay. And then you also testified that in your view it  
11 was very well understood by Mr. Duker that the -- that ARCO's  
12 responsibility ended after five years; is that right?

13 A "Correct.

14 Q "Did you ever talk to Brack Duker about this?

15 A "I had no direct contact with Brack Duker.

16 "My sole conversations that I testified based upon when  
17 Mr. Brack Duker talk to all hands, as we used to call them,  
18 when he used to come to Louisville and talk to all the  
19 employees. And what I heard with my conversation with  
20 Boultinghouse. And when I sat in the meeting on a listening  
21 mode.

22 Q "Did any of those conversations discuss the indemnity  
23 provision?

24 A "Yes.

25 Q "Okay. Who talked about the indemnity provision?

DAS CROSS-EXAMINATION BY LAUER

1 A "Mr. -- Mr. Marlan Boultinghouse.

2 Q "Okay. So --

3 "But did you ever hear Mr. --

4 "So you never heard Mr. Duker talk about the indemnity  
5 provision?

6 A "As I mentioned to you, Mr. Stone, I had no direct  
7 knowledge or conversation with Mr. Brack Duker.

8 Q "What about other members of the management of MAIC or  
9 CFAC, did you ever hear, for example, Mr. Broussard talk about  
10 the indemnity provision?

11 A "I have no -- I had no conversations with Mr. Broussard  
12 aside from my dealings with him at Alpart when I was the  
13 management rep for ARCO Aluminum. We did not talk about  
14 anything beyond that subject.

15 Q "And did you ever discuss the indemnity provision with  
16 anyone else at CFAC?

17 A "I did not.

18 Q "Did you ever discuss with anyone whether CFAC was  
19 waiving any statutory rights in the ac- -- in the indemnity  
20 provision?

21 A "Can you explain the word 'statutory'? I don't  
22 understand the word.

23 Q "Were you aware of any written agreement or written  
24 understanding that CFAC would give up any legal rights it had  
25 to be paid by ARCO?

DAS CROSS-EXAMINATION BY LAUER

1 A "My only knowledge is the contract that was drafted, that  
2 was written and that was shared by Mr. Boultinghouse with his  
3 staff and I was a staff member. I have no knowledge of  
4 anything beyond that.

5 Q "And, as we said, you had no knowledge of the negotiation  
6 of the agreement, right?

7 A "Correct."

8 MR. LAUER: Page 107, line 14.

9 Q "Okay. You testified that at some point some SPL was  
10 shipped offsite and I believe you said it was to Kaiser and to  
11 Reynolds.

12 "Do I have that right?

13 A "Correct.

14 Q "What -- what were the years in which that occurred?

15 A "I -- my --

16 "When I worked for Anaconda Aluminum or ARCO Aluminum in  
17 Tucson, Arizona in 1981 until '83, that was happening at that  
18 time. I don't have any knowledge when it started or when it  
19 ended.

20 Q "Do you know the approximate quantity of SPL that was  
21 shipped offsite in that period?

22 A "I do not know the approximate quantity."

23 (Discussion off the record at counsel table.)

24 BY MR. LAUER:

25 Q "I was a little unclear on your testimony about pot

DAS CROSS-EXAMINATION BY LAUER

1 diggings and the relationship of pot diggings to SPL.

2 "Do pot diggings contain other material that is not  
3 classified as SPL?

4 A "It may.

5 Q "Does the composition of pot diggings vary significantly  
6 between different facilities?

7 A "It may.

8 Q "Can it vary between pots, like individual pots at the  
9 same facility?

10 A "Highly unlikely. There are many pots in a potline; so  
11 the likelihood of pot -- pot number 9 changing much from pot  
12 number 8 from same potline -- potline A is -- is highly  
13 unlikely.

14 "It's a heterogeneous material; so it's -- so there is  
15 some variation. But the pedigree is picked by the -- what  
16 line it came from, the pot, which line it came from."

17 MR. LAUER: Page 114, line 1.

18 Q "Didn't you testify it was part of your job to study SPL  
19 disposal at the site?

20 A "My job was to study the SPL in terms of what processes  
21 and what products or what we can do to treat chemically the  
22 SPL so we can recover the chemicals and carbonaceous  
23 materials. That was my research assignment.

24 Q "Did that assignment include studying the potential  
25 effects of SPL on groundwater?

*DAS CROSS-EXAMINATION BY LAUER*

1 A "No, it did not."

2 MR. LAUER: Page 117, line 1.

3 Q "The concerns at the time about SPL leaching into  
4 groundwater, was it -- was it known at the time that SPL  
5 contained cyanide?"

6 A "Yes."

7 Q "Was it known that SPL contained fluoride?"

8 A "Yes."

9 Q "Were those two chemicals seen as the -- as the main  
10 risks of contaminating groundwater?"

11 A "I would say yes."

12 MR. LAUER: Page 117, line 19.

13 Q "Was cyanide thought to be one of the possible  
14 groundwater contaminants from SPL?"

15 A "Yes, it was."

16 Q "And the same for fluoride?"

17 A "Yes, it was."

18 Q "Do you know if ARCO had a groundwater seep permit at the  
19 time, 1980?"

20 A "I do not know that information."

21 Q "I believe you said groundwater was monitored."

22 "Were there monitor wells installed at the site?"

23 A "I do not know how it was monitored. All I know is it  
24 was monitored and I remember seeing the data saying they met  
25 the Montana EPA requirement."

DAS CROSS-EXAMINATION BY LAUER

1 Q "So you wouldn't know how many monitor wells were  
2 installed?

3 A "No, I would not know that.

4 Q "Or where they were on the site?

5 A "Last part is not clear to me.

6 Q "Or where -- where the wells were on the site?

7 A "No, I would not know the geography or location or  
8 topography of the monitored sites. All I would know is that  
9 they were monitored and the results met or exceeded the  
10 Montana EPA at that time.

11 Q "When did you first review groundwater monitoring data at  
12 the site?

13 A "I would say I -- probably in 1981, '82 timeframe when I  
14 was -- I had the research project at Columbia Falls.

15 "The key word is not 'review.' I saw the data because  
16 that was not part of my project. My project was to -- how to  
17 treat the fresh SPL.

18 Q "So you're distinguishing between 'review' and 'saw.'

19 "Does that mean you looked at it but you didn't -- you  
20 didn't commit the results to memory?

21 A "All -- all I remember is that, you know, obviously 1981  
22 is a few more years ago and -- as you may do the math, so --

23 Q "I understand, yes.

24 A "Yeah. Yeah. So -- so --

25 "But I do remember that if the data and information was

DAS CROSS-EXAMINATION BY LAUER

1 not meeting the specs -- I remember that part, it did meet the  
2 specs. I don't remember the topography or geometry (sic)  
3 or -- or GPS settings of the -- of the -- of the sites and how  
4 they were measured.

5 Q "By -- by 'meet the specs,' do you mean met regulatory  
6 requirements for cyanide?

7 A "It met the regulatory requirement for cyanide and  
8 fluoride or whatever else was required by the Montana EPA  
9 authority.

10 Q "Did you ever --

11 "Were you ever responsible for writing a report about  
12 groundwater monitoring data?

13 A "I was not.

14 Q "Do you know when you last looked at groundwater  
15 monitoring data for the Columbia Falls site?

16 A "My recollection is, let's see, probably '85 when I  
17 talked to Bob Sneddon.

18 Q "Was the data --

19 "Do you know how recent the data was at that time when  
20 you looked at it?

21 A "I don't remember that, Mr. Stone."

22 MR. LAUER: Page 123, line 17.

23 Q "When you arrived in 1981, what were you told, if  
24 anything, about monitoring practices for the landfills that  
25 had existed at the site before you arrived?

DAS CROSS-EXAMINATION BY LAUER

1 A "No information given to me.

2 "After I arrived, I made a trip to Columbia Falls to  
3 initiate the project on spent potline. There was --

4 "I was not required of my job to understand the  
5 monitoring of the water system. I don't recollect --  
6 recollect any conversation to that effect. That was not part  
7 of my job. My job was to collect the samples and then find  
8 the ways to mitigate that.

9 Q "Well, I was -- I was not asking you about the water  
10 systems, I was asking about the landfills.

11 "Were you told anything about prior practices on  
12 monitoring the landfills?

13 A "I was not."

14 MR. LAUER: Page 155, line 19.

15 Q "Do you know -- do you know when the leachate pond was  
16 expected to reach capacity?

17 A "I don't."

18 Q "Oh. I see here, actually, in the next paragraph, 'Two  
19 years of capacity, or 16,300 cubic yards, were estimated  
20 assuming a final waste depth of fifteen feet and a 2-point' --  
21 or 'a 2-to-1 backslope.'

22 "Are you aware of any discussions about what should be  
23 done with the leachate once the ponds reached capacity?

24 A "No, I -- I was not in any discussion. The only reason I  
25 was copied on this is because I was working on different ways

DAS CROSS-EXAMINATION BY LAUER

1 of handling the spent potline. I was not involved in  
2 day-to-day operational decisions made on the disposition of  
3 the spent potline.

4 Q "Okay. So you -- you were not --

5 "Were you ever a part of any conversation about what to  
6 do with the leachate when it reached capacity --

7 A "No, I was not.

8 Q "-- when the pond reached capacity?

9 A "I was not.

10 Q "Okay. Okay.

11 "And do you know anything about a perforated pipe system  
12 being built to move the leachate out of the pond?

13 A "No, I -- I don't.

14 Q "Okay. Do you know if the leachate was ever sampled  
15 chemically?

16 A "I assume so based on data I saw. But I -- I have no  
17 knowledge of, you know, how quick -- when, how many locations  
18 and I -- you know, I -- I was --

19 "My main job was to do the recycling research for future  
20 SPL as opposed to operational issues.

21 Q "Okay. And I believe you testified you were not aware of  
22 any occasions on which ARCO moved this leachate out of the  
23 pond; am I right?

24 A "Yes, you are right."

25 MR. LAUER: Page 158, line 25.

DAS CROSS-EXAMINATION BY LAUER

1 Q "Okay. And you don't know anything about ARCO's  
2 treatment of leachate at the site?

3 A "No, that's -- I don't. I don't have firsthand  
4 knowledge.

5 Q "Do you know if ARCO was doing anything to measure  
6 possible effects on groundwater from the leachate ponds?

7 A "The only recollection I have that we took -- ARCO  
8 took -- not -- not I.

9 "ARCO took the samples of the leachate and -- and the  
10 groundwater for the monitoring purposes to meet the Montana  
11 EPA requirements. I don't have any details as to how often  
12 and how it was done.

13 Q "Okay. Do you know when the leachate pond reached  
14 capacity?

15 A "I do not know the answer, sir."

16 MR. LAUER: Page 164, line 19.

17 Q "In preparing this part of the report you testified that  
18 you talked to Bob Sneddon and I believe that you also  
19 testified that you looked at some groundwater monitoring data.

20 "Do I have that right?

21 A "Yes.

22 Q "Did you do anything else to prepare this section of the  
23 report?

24 A "No, I did not. Conversation based upon Bob Sneddon and  
25 conversation based upon Jack Goldman of the Aluminum

DAS CROSS-EXAMINATION BY LAUER

1 Association.

2 Q "Okay. And did Jack Goldman have firsthand knowledge of  
3 the Columbia Falls site?

4 A "I cannot say definitively whether he had or not. But  
5 he -- he was the environmental expert at the Aluminum  
6 Association and he would have knowledge of the -- all or most  
7 aluminum smelting facilities, including Columbia Falls. But I  
8 cannot say that he exactly knew about Columbia Falls.

9 "That, you know, obviously it is '86, a long time ago, I  
10 don't have a recollection of -- of the extent of his knowledge  
11 of Columbia Falls.

12 Q "Okay. Now, at the bottom of this page you say 'Calcium  
13 Fluoride Sludge Pond - There are no issues.'

14 "Do you see that?

15 A "Yes, I do.

16 Q "And that's -- that's all you say about the calcium  
17 fluoride sludge pond, right?

18 A "Yeah. Yeah. Correct.

19 Q "Do you remember what you did to reach that conclusion?

20 A "My conclusion was researched upon -- based upon my  
21 conversation with Bob Sneddon and -- who -- who was the plant  
22 manager prior to the sale and his knowledge and his  
23 information. So I -- I --

24 "This is based upon what I learned from Bob Sneddon after  
25 the plant was sold.

DAS CROSS-EXAMINATION BY LAUER

1 Q "Okay. Do you remember whether the calcium fluoride  
2 sludge pond was lined?

3 A "No, actually I don't remember at this time. I -- you  
4 know, I don't.

5 Q "Do you know if it -- do you know if it was capped?

6 A "To the best of my knowledge it was not capped."

7 MR. LAUER: Skipping to line 17 on 166.

8 Q "Do you know anything about an EPA Superfund  
9 investigation into the site around 1988?

10 A "I have no direct knowledge of what happened in 1988.  
11 Based upon what I heard in the press and at the Aluminum  
12 Association meetings, that there was some conversation of a  
13 Superfund site at Columbia Falls. I do not know when it  
14 happened, if it happened and how it happened. But there was  
15 quite a bit of press at that time that that site could have  
16 been but I don't have any direct knowledge or recollection of  
17 that.

18 Q "Do you know what the causes were for the investigation?

19 A "Causes for --

20 "I would not know.

21 Q "And do you know what came of the investigation or how it  
22 concluded?

23 A "No, I don't."

24 MR. LAUER: Page 178, line 22.

25 Q "Do you have any knowledge of the EPA investigation that

DAS CROSS-EXAMINATION BY LAUER

1 Mr. Duker is referencing here?

2 A "I have no knowledge.

3 Q "Okay. Do you have any knowledge of -- of when, if at  
4 all, ARCO learned that fluoride was reaching the Flathead  
5 River through groundwater infiltration?

6 A "I have no knowledge.

7 Q "And the same question for cyanide; do you have any  
8 knowledge of -- of when, if at all, ARCO learned that cyanide  
9 was reaching the river through groundwater infiltration?

10 A "I have no knowledge."

11 MR. LAUER: Page 183, line 3.

12 Q "At any time at the Columbia Falls site did you take any  
13 steps to independently survey the landfills?

14 A "I did not."

15 MR. LAUER: Page 184, line 16.

16 Q "Okay. You said that Bob Sneddon and you both concluded,  
17 as part of the 1986 report, that ARCO was in compliance at the  
18 time of the -- I'm sorry, this might have been the 1984  
19 report.

20 "In connection with due diligence at the site, you and  
21 Bob Sneddon both concluded that ARCO was in compliance with  
22 environmental regulations; is that right?

23 A "Correct.

24 Q "Was this conclusion based on anything other than your  
25 reliance on Mr. Sneddon's data?

*DAS CROSS-EXAMINATION BY LAUER*

1 A "No. That was the only source of information, data,  
2 recollection and conversations.

3 Q "Okay. You testified that Montana's inspection system  
4 was not as rigorous as other states', or that might have been  
5 in the document.

6 "Do you have any view as to what was less rigorous about  
7 it?

8 A "I do not have any additional information. My -- all  
9 source of information from Columbia Falls in Montana came from  
10 Mr. Sneddon and other people when I was still -- when ARCO  
11 still owned the facility. And so this is the entire source of  
12 mine.

13 "No independent validation of my statement except what I  
14 was told or heard and listened and learned and experienced,  
15 the other people before '95 and with Sneddon -- Mr. Bob  
16 Sneddon after '95."

17 MR. LAUER: Page 190, line 13.

18 Q "Can you turn back to Exhibit 73, which is your May 6 or  
19 May 8, 1986 memo to Mr. Boultinghouse?"

20 MR. RAUCHWAY: Eliot, I think that's my section.

21 MR. LAUER: Do you want to do it?

22 MR. RAUCHWAY: Sure.

23 MR. LAUER: Please.

24 MR. RAUCHWAY: Page 190, line 13.

25 ///

DAS REDIRECT EXAMINATION BY RAUCHWAY

1 REDIRECT EXAMINATION

2 BY MR. RAUCHWAY:

3 Q "Can you turn back to Exhibit 73, which is your May 6 or  
4 May 8, 1986 memo to Mr. Boultinghouse?

5 A "Okay. I'm trying to find it. I know I had it. I had  
6 it. Just give me a second. I have one in March.

7 "Are you talking about the May 9th -- May 1990?

8 Q "No, no, no. The 1986 memo from you to  
9 Mr. Boultinghouse.

10 A "Yeah, yeah. I remember that. I need to find it.

11 "Yeah. That's May 8, 1986, right?

12 "Yeah.

13 Q "Yes.

14 A "Yes, I have it, Jon.

15 Q "Okay. Am I correct in understanding that your  
16 assignment here from Mr. Boultinghouse was to update the  
17 earlier December 1984 Due Diligence Report?

18 A "Correct.

19 Q "So you were focused on changed conditions or changed  
20 events from December 1984 until May of 1986 when you wrote  
21 your memo?

22 A "Yes.

23 Q "Okay. But you didn't go back and do a reassessment of  
24 the conclusions about conditions at the site prior to  
25 December 1984; is that what you meant by -- when you said you

*DAS REDIRECT EXAMINATION BY RAUCHWAY*

1 didn't do an 'independent assessment'?

2 A "Yes. The December 20, 1984 was written prior to the  
3 sale of the facility to Columbia Falls. And so it was a year  
4 and a half later I was asked by Mr. Boultinghouse, the sale  
5 already had happened, to set the base point, 'base point'  
6 meaning what was the status of the SPL at Columbia Falls  
7 before the sale.

8 "And I was -- I was allowed to talk to Mr. Bob Sneddon  
9 and Mr. Jack Goldman and use my own scientific knowledge and  
10 experience in reviewing the data that Mr. Sneddon showed to  
11 me -- showed to me; so those were the three sources: A  
12 conversation with Bob Sneddon, analyze the data that he shared  
13 with me, and what was known in the industry.

14 "And then I came with my own recommendations based upon  
15 those three things and put my interpretation on what was  
16 written on December 20, 1984.

17 Q "Okay. And I think you mentioned something about that  
18 there, but let me make sure we have this.

19 "Was part of that process conducting your own review of  
20 the file, the records that the company maintained and the data  
21 that was available to the company for the conditions of the  
22 Columbia Falls site?

23 A "Correct."

24 MR. RAUCHWAY: We're all finished, Your Honor.

25 THE COURT: All right. You can step down.

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1           Would you call your next witness, please?

2           MS. WURTZLER: Atlantic Richfield calls Peter  
3 Jewett.

4           THE COURT: Please step up in front of the clerk  
5 here, raise your right hand and be sworn as a witness in this  
6 matter.

7           (Oath administered to the witness.)

8           THE COURT: Have a seat over here.

9           THE WITNESS: (Complied with request.)

10          MS. WURTZLER: May I approach the clerk with the  
11 witness statement?

12          THE COURT: Yes.

13          MS. WURTZLER: Thank you (handing).

14          THE COURT: Would you tell us what your full name  
15 is, please?

16          THE WITNESS: Peter Day Jewett, J-e-w-e-t-t.

17          THE COURT: And, Mr. Jewett, what city do you live  
18 in?

19          THE WITNESS: Fall City, Washington.

20          THE COURT: And what is your profession or  
21 occupation?

22          THE WITNESS: I am a principal engineering geologist  
23 at Farallon Consulting.

24          THE COURT: All right.

25          Ms. Wurtzler?

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 MS. WURTZLER: Thank you.

2 Could we have Exhibit 1063, please?

3 MS. STEPHAN: (Complied with request.)

4 WHEREUPON,

5 MR. PETER DAY JEWETT,

6 called for examination by counsel for defendant, after having  
7 been first duly sworn to testify the truth, the whole truth,  
8 and nothing but the truth, testified as follows:

9 DIRECT EXAMINATION

10 BY MS. WURTZLER:

11 Q Mr. Jewett, is this your CV?

12 A Yes, it is.

13 Q Now you said you are a geologist -- excuse me,  
14 engineering geologist. What does that involve?

15 A Well, I'm a licensed geologist in Washington State and a  
16 licensed engineering geologist.

17 A geologist is really the investigation of subsurface  
18 conditions: soil, groundwater, rocks, that sort of thing.

19 An engineering geologist is a subset of a geology  
20 license, and that's involved in working in civil  
21 engineering-type projects, the crossover with engineering. So  
22 it's much more involved in evaluating and the designing of  
23 remediation alternatives, for example.

24 Q Okay. Your resumé is quite extensive, but let's just  
25 focus on a few aspects of it because the resumé is in evidence

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 and the Court has a copy of it, so we don't need to belabor  
2 this.

3 Could we have Slide No. 2, please?

4 MS. STEPHAN: (Complied with request.)

5 BY MS. WURTZLER:

6 Q All right. Let's first talk about your 35 years of  
7 experience. What kind of work have you been doing that is  
8 relevant to the work that you've done in this case?

9 A My entire career has been involved in the environmental  
10 consulting business, so it's -- I've been involved in  
11 environmental compliance of operating facilities, closure of  
12 operating facilities, environmental due diligence for property  
13 transactions, subsurface investigations, RI's for investigation  
14 of the nature and extent of contamination, evaluating and  
15 selecting cleanup alternatives, designing and implementing  
16 cleanup alternatives, as well as negotiating with regulatory  
17 agencies in behalf of my client.

18 Q Do you have any specific experience with these kind of  
19 activities in connection with aluminum smelters and reduction  
20 works?

21 A Yes, I do. I've worked on a number of aluminum reduction  
22 and smelters. For example, I've worked on the Alcoa Intalco  
23 facility in Ferndale, Washington. I've worked on the Kitimat  
24 site in British Columbia, a number of facilities in Quebec  
25 which are lengthy and French and hard to spell. My firm has

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 worked on a number of sites in Washington State, including the  
2 Kaiser facility in Spokane, the Marietta site in the Dalles,  
3 and the Lockheed site in Goldendale.

4 Q And have you worked on aluminum manufacturing facilities?

5 A Yes. I'm currently working on an aluminum manufacturing  
6 facility in the Dalles right now that's basically a recycling  
7 facility. I worked on a manufacturing facility in El Campo,  
8 Texas and a number of manufacturing facilities in Quebec.

9 Q Now with respect to the U.S. facilities, the smelters, do  
10 they have RCRA Part B permits?

11 A All of the smelters that I and my firm have been involved  
12 in in the United States are RCRA facilities.

13 Q At the aluminum reduction and smelter facilities that you  
14 and your firm have worked at, have you been involved in  
15 closing operations?

16 A Yes. So the Ferndale site is currently mothballed. It's  
17 on hold, I guess. So I was involved, during the sort of  
18 shutdown, evaluating alternatives and assisting with one  
19 specific waste management unit. Others at my firm were  
20 involved in the Kaiser facility and the Dalles facility, both  
21 in remediation and kind of unwinding the business.

22 Q Have buildings been demolished at these sites?

23 A At Ferndale, no, it has not been demolished. At the  
24 other sites, the buildings were demolished; however, they were  
25 all demolished as part of an operational requirement. The

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 buildings were kind of worn out. They were dilapidated.

2 There wasn't a need for them to sell, but they were not  
3 demolished as part of the remedial action.

4 Q Were they demolished as part of the owners' decision to  
5 repurpose and redevelop the site?

6 A That's my understanding.

7 Q Based on your experience at these facilities, can you  
8 provide us a brief description of the process by which you  
9 make aluminum, including the raw materials and the waste  
10 streams?

11 And can we have the next slide?

12 MS. STEPHAN: (Complied with request.)

13 THE WITNESS: Okay. This is, as you heard about in  
14 the prior reading, this is essentially a cross-section of a  
15 pot. (Indicating.) So the top on those blue lines here,  
16 those are -- that's the anode. That's where the power comes  
17 in. Down here on the bottom, here, that's the cathode. So  
18 it's basically an electric current like a battery that flows  
19 through. Within this black area here, this is carbon. So at  
20 the Columbia Falls facility, this was carbon briquettes. The  
21 blue lines would have been steel rods. Beneath that in the  
22 red is the cryolite that we heard about in the last reading,  
23 and that, that's a fluoride salt that's heated. The alumina,  
24 which is the ore source, is dumped into that cryolite, and  
25 then it dissolves the aluminum oxide under heat, and then an

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 electric current is shoved through it. The electrical current  
2 breaks the aluminum and oxygen bond. Oxygen goes off with  
3 CO<sub>2</sub>. The aluminum drops out as metal.

4 So the fluoride comes from the cryolite mixture,  
5 which is a fluoride salt. The cyanide comes from carbon  
6 reacting with nitrogen in the air to create cyanide. And then  
7 molten aluminum drops out the bottom where you see the gray.  
8 The green area are the bricks that act as an insulator for the  
9 pot.

10 BY MS. WURTZLER:

11 Q Okay. So you said that the cyanide is carbon combining  
12 with nitrogen in the air. Did any either CFAC or Atlantic  
13 Richfield bring cyanide to the site?

14 A No. Cyanide is a byproduct of the process. So the  
15 electrical process creates a free carbon atom. There's a --  
16 nitrogen is all in the oxygen, so that carbon combines with  
17 the nitrogen and that -- CN is what cyanide is.

18 Q Okay. Now the drawing that you have up here on the  
19 slide, is that a vertical stud Soderberg?

20 A So a vertical stud Soderberg, which was the operation at  
21 CFAC, the blue would be steel rods. The gray would be the  
22 briquettes, carbon briquettes. So that's, that's the process  
23 they used. So that carbon briquette would get eaten up and  
24 used in the process, as you heard. The cathode, carbon paste  
25 at the bottom would get clogged up.

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1           A bake -- prebaked, which you've heard about as well  
2 earlier, instead of having this briquette system in here, they  
3 would create a carbon rod that would be prebaked and  
4 compressed, and that would be the carbon source. And so  
5 instead of having big bricks of briquettes, they would have  
6 these carbon rods. It was more efficient in transferring the  
7 electricity, and it didn't wear out as fast so the pots lasted  
8 longer.

9 Q       Was the prebake technology ever used at the Columbia  
10 Falls Aluminum Company site?

11 A       Not to my knowledge.

12 Q       So both companies, the vertical stud Soderberg?

13 A       Yes.

14 Q       How large are the pots?

15 A       They vary at sites, so maybe we can go to the next  
16 cartoon.

17 Q       Yes, please.

18           MS. STEPHAN: (Complied with request.)

19           THE WITNESS: So I did not draw this picture, just  
20 to be clear.

21           So this is kind of a vision of what a potline would  
22 look like. So you can see the man here. It kind of gives you  
23 an idea. This was in -- I believe the buildings was about a  
24 million square feet, which converts to about 38 football  
25 fields. So pretty big building. You know, they were able to

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 drive yellow iron up and down the rows. They had, I think, I  
2 would assume, overhead cranes. I didn't actually see the  
3 interior of the facility. But this gives you a sense of the  
4 size of a pot.

5 BY MS. WURTZLER:

6 Q Okay. And at this facility they had somewhere between  
7 450 and 600 pots?

8 A That's correct.

9 MS. WURTZLER: Okay. Let's go to the next slide,  
10 please.

11 MS. STEPHAN: (Complied with request.)

12 BY MS. WURTZLER:

13 Q And let's -- what did you do in this case?

14 A So I visited the site in November of 2019, and I walked  
15 around with Mr. Steve Wright.

16 Q Did you get to see inside the potrooms at that time?

17 A No. The building had been demolished by that time.

18 Q Okay. Please continue with what your work has consisted  
19 of.

20 A I reviewed all the available reports, the sampling  
21 analytical data going back to the beginning of the facility,  
22 the operational history, the regulatory interchange and  
23 interactions with MDEQ and EPA, the draft and final versions  
24 of the Phase I subsurface investigation report, the RI, the  
25 FS, the risk assessment reports, all of those documents.

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1           I also obtained information through public domain:  
2 guidance documents, regulatory guidance documents, aluminum  
3 history, those kinds of issues.

4           I read the other expert reports as well as their  
5 depositions. I was deposed, and I prepared four expert  
6 reports.

7 Q       Did you have access to the documents produced by the  
8 parties, basically the record for this site?

9 A       Yes. There was a relativity database that we had access  
10 to. So as I would begin my research and I would discover a  
11 document that I might find interesting or of value, I would go  
12 and research through the database to find that document  
13 myself.

14 Q       And have you been here in trial listening to some of the  
15 testimony?

16 A       I was here yesterday, yes.

17 Q       Okay. Now you mentioned four reports. Which -- what are  
18 the reports that you did?

19 A       I prepared an expert report prior to obtaining the draft  
20 RI. The draft RI was then provided to me, and I revised or  
21 amended that report based on the RI document. I prepared a  
22 rebuttal report to the other experts, and I prepared an expert  
23 report after the FS was provided.

24 Q       And did you prepare a conceptual site model?

25 A       Yes. In my first two reports, I prepared what's called a

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 conceptual site model. And the idea of a conceptual site  
2 model is you take all of the information that you have  
3 available and essentially create a story. You create what was  
4 going on, who was doing it, when did it happen, why was it  
5 being done. It creates a timeline of operations. It creates  
6 a timeline and understanding of when information for  
7 contamination was known, for example; when the contamination  
8 may have been released; what was known about that. And both  
9 of those timelines are presented in my first two reports.

10 Q And so what -- why do you prepare a conceptual site  
11 model? How does that assist you in your work?

12 A A conceptual site model provides a foundation and a basis  
13 for understanding a site. I mean, there's a lot of complexity  
14 to a site and operational history, a regulatory history,  
15 contamination, subsurface conditions. All of that interplay  
16 needs to be put together in a, in a concept or a model that  
17 helps develop opinions.

18 The RI eventually prepared the conceptual site model.  
19 However, I did not have the RI when I was preparing my first  
20 expert report, so I prepared my own based on the data that I  
21 was able to obtain. So it's really the foundation for me to  
22 develop my opinions.

23 MS. WURTZLER: Okay. Let's turn to the next slide,  
24 please.

25 MS. STEPHAN: (Complied with request.)

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 BY MS. WURTZLER:

2 Q Now you've expressed a number of opinions in your report,  
3 and we're only gonna talk about two of those today, and I've  
4 put them up on the screen.

5 Is this consistent with what you're prepared to talk  
6 about today?

7 A Yes. My first opinion really is that a number of the  
8 actions that were required under the --

9 MR. AMENT-STONE: (Standing.)

10 THE COURT: Just a sec. There's an objection.

11 MR. AMENT-STONE: Undisclosed expert opinion.

12 THE COURT: Is it disclosed?

13 MS. WURTZLER: Yes.

14 THE COURT: Page, line?

15 MS. WURTZLER: Okay. For Opinion No. 1, look at the  
16 first, March 25, report. And that's the larger one.

17 THE COURT: What page?

18 MS. WURTZLER: Page 4, and it's under the second set  
19 of bullet points. It reads, "Based on my experience at  
20 aluminum reduction facilities in the United States and Canada,  
21 SPL, process sludge, and process wastewater --

22 THE COURT: The objection is overruled.

23 You can continue with your direct examination.

24 MS. WURTZLER: Okay.

25 ///

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 BY MS. WURTZLER:

2 Q All right. So I think you were in the middle of your  
3 answer, Mr. Jewett.

4 A So my answer is that, yes, this, my first opinion, is  
5 based on my experience in working in environmental compliance  
6 and with my clients in shutting down large operating  
7 facilities, that a number of the elements that are currently  
8 being required under the -- or have been addressed in the FS  
9 are operational facilities that would have and should have  
10 been done at closing and winding up the business.

11 Q All right. And what experience do you have that you base  
12 this on?

13 A In my earlier career, since I'm from the Northwest, I've  
14 done a number of pulp and paper facility shutdowns. They have  
15 large sludge ponds. They have waste landfills. Very similar,  
16 different components. And in all of those facilities, the  
17 demolition of the building was an operational expense. The  
18 capping of the landfills, the closing of the sludge ponds were  
19 all considered operational expense.

20 I'm also experienced on the Ferndale facility for Alcoa,  
21 and they have also -- though it's a RCRA facility, they also  
22 had requirements for shutting down their operations, closing  
23 their waste management units.

24 I've done a number of -- expert work on insurance claims  
25 where insurance coverage for the remediation part of that

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 evaluation is cost of doing business and what are operational  
2 costs versus cleanup costs.

3 Q Okay. When you talk about "close," what do you mean with  
4 respect to a landfill or a sludge pond?

5 A Well, the idea of closure is that a landfill or a sludge  
6 pond is a, is a waste management unit. It's an operational  
7 unit within an operating facility, so it's being used.  
8 There's waste being put into it. So it's, it's part of a  
9 functioning system.

10 And by closing, you're capping it or covering it in a way  
11 that, that precludes exposure to people walking over it. It  
12 precludes the potential for things to migrate or cause  
13 contamination into groundwater, soils, those kinds of things.  
14 So it's the idea of an integrated winding up of a business.

15 I think maybe a simplistic way to look at this is if  
16 you're a mechanic and you're generating waste oil and you have  
17 a waste oil above-ground storage tank out in the backyard and  
18 you decide to shut your business down, you don't get to leave  
19 that waste oil tank out in the backyard until it rusts and all  
20 the waste oil falls on the ground and then have to clean it up  
21 because someone tells you to and have somebody else to pay for  
22 it. The intent is that a business is to wind up and control  
23 that contamination or control that waste and put it to bed in,  
24 in -- as part of their operating procedures.

25 Q Now with respect to capping a landfill, does the practice

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 of operational closure go beyond just installing the cap? Is  
2 there some obligations after that?

3 A Well, the landfill never disappears. I mean, it's still  
4 an operating system in the sense that it's there to store  
5 waste. So by capping it, you contain that waste, but that cap  
6 has to be maintained. So there's a long-term obligation in  
7 any kind of closure of a landfill or a sludge pond that leaves  
8 waste in place, or *in situ*, requires long-term monitoring,  
9 requires maintenance, and it requires a commitment to make  
10 sure that it functions into the future.

11 Q And that would be an operational cost of the business?

12 A Absolutely, that is. That's part of the commitment for a  
13 company to end their operations and deal with what they've  
14 generated as part of that.

15 Q So you've mentioned a couple purposes for the closure:  
16 eliminating exposure to materials, prevent the units from  
17 releasing to the environment. Are there other reasons for  
18 doing this?

19 A Well, I think it's an integrated part of closing a  
20 business. When you start a business, you certainly don't want  
21 it to end, but when it does end you have a commitment to take  
22 care of what you've created and what you've generated. It's  
23 also part of a stewardship in the sense that you have a duty  
24 to do that. And it's part of transferring property in a way  
25 that creates value or creates meaning for a future. So you

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 have a piece of property; by going through the business  
2 requirements of containing and closing your waste management  
3 units, you then provide a property that has more value and is  
4 more sellable.

5 Q And who takes care of doing these operational activities?

6 A It's been my experience that it's always the current  
7 operator at the time of closure.

8 Q The final plant operator operating the site?

9 A Absolutely. It's all -- I've never, in my entire career,  
10 I've never seen a prior owner being requested to do that.

11 Q And the nature of the cost to do this work, you said it's  
12 a known and expected cost of doing business; is that right?

13 A Yes. I think that people -- an operating facility, they  
14 know they're generating wastes. They have costs to generate  
15 that waste. They're operating a sludge pond or a landfill.  
16 There are costs to operate that sludge and landfill. And when  
17 they close the business down, there's an expectation that they  
18 pay for that closure and capping of those materials.

19 Q And are you familiar with any situation where this final  
20 owner, doing the closure work, is able to have somebody else  
21 pay for the work?

22 A No, I do not. It's a very common occurrence in the  
23 insurance coverage, where you have liability insurance that  
24 pays for cleanup, and that is never covered under insurance.

25 Q Okay. Now how does this apply here?

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 A It applies here because there's a number of facilities or  
2 units that are waste management units that they use to dispose  
3 of and store waste; that, at the time they wound up their  
4 business in 2009, the expectation would have been that they  
5 should have and could have closed all of those units.

6 Q Now have you identified some specific work and specific  
7 units at this site --

8 A I have.

9 Q -- that would be this operational -- operation of smelter  
10 business closure costs?

11 A Yes, I have.

12 MS. WURTZLER: Okay. May we have the maps, please?

13 MS. STEPHAN: (Complied with request.)

14 BY MS. WURTZLER:

15 Q And which units have you identified?

16 A Well, let's see if this works. We'll start with this.

17 Q I think Karen may need to do this. Do you want to start  
18 with industrial landfill?

19 A So we'll start with the industrial landfill, as you can  
20 see there, up here. So the industrial landfill was a landfill  
21 used to dispose of essentially inert waste: debris,  
22 construction debris. When I was there, it was uncapped. It  
23 was gravel to the surface. I have seen no documentation that  
24 it's capped. The closure requirement or the alternative  
25 presented in the FS is to lay a permeable cap on it. It's not

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 a source of cyanide or fluoride to groundwater, so it's not  
2 part of a source of contamination. So closing an industrial  
3 landfill like that, capping it, would be an expected part of  
4 operations.

5 Q Okay. And what's the next one?

6 A Well, let's look at the asbestos landfill.

7 MS. STEPHAN: (Complied with request.)

8 THE WITNESS: So the asbestos landfills, as you can  
9 see there, again, they were used for asbestos-containing  
10 material, debris. They're not a source of groundwater -- of  
11 cyanide or fluoride to groundwater. They have not been  
12 capped, to the best of my knowledge. And so, again, the  
13 preferred alternative is to lay a cover over those asbestos  
14 landfills, which would be a normal cost of closing and  
15 shutting down a waste management unit like that.

16 BY MS. WURTZLER:

17 Q Now did you read some of the testimony from the days of  
18 trial when you were not present in the courtroom?

19 A I did, yes.

20 Q Do you recall that Mr. Batson indicated that he believed  
21 that there was a cap on the asbestos landfills?

22 A Yes, and that's incorrect.

23 Q When you were out there on the -- doing the site visit,  
24 did you see any sign of a cap on the asbestos landfills?

25 A No. They were grassed. I mean, there was vegetation

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 growing on them, but I didn't see any evidence that there was  
2 a formal cap on it.

3 Q Okay. And which, which waste unit should we move to  
4 next?

5 A Let's look at the center landfill.

6 MS. STEPHAN: (Complied with request.)

7 THE WITNESS: So here is the center landfill. So  
8 it's my opinion -- I believe that the center landfill is not a  
9 source of cyanide or fluoride to groundwater. It's capped.  
10 So the alternative moving forward is maintenance of that cap,  
11 and so, again, that ongoing maintenance of an existing cap  
12 would be an operational expense that would be incurred by a  
13 company shutting down a business.

14 Q Okay. And let's go back to the east landfill.

15 A That would be the next one.

16 MS. STEPHAN: (Complied with request.)

17 BY MS. WURTZLER:

18 Q Yeah. Is that one capped now?

19 A The east landfill is capped, yes. So there is a cap that  
20 was placed. The alternative is to maintenance of that cap.  
21 It's not a source of groundwater contamination for fluoride or  
22 cyanide. So, again, maintaining that cap would be an  
23 operational expense.

24 MS. WURTZLER: And let's go to north perc ponds.

25 MS. STEPHAN: (Complied with request.)

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1                   THE WITNESS: So the north perc ponds, there they  
2 are, which we've heard quite a bit about.

3                   These are sludge ponds where that material is still  
4 there. It's not capped, to my knowledge. In fact, when we  
5 were there, it was fenced and you really couldn't go into it.  
6 It was still capturing stormwater run-off, so there is still  
7 some water coming into it. Again, it's not been identified as  
8 a source of contamination of fluoride or cyanide to  
9 groundwater.

10                  So the cleanup plan at this point is to excavate it,  
11 I think, and place it on the wet scrubber sludge pond. Doing  
12 that or capping it would certainly be something that you would  
13 expect to do as part of closing the system down.

14 BY MS. WURTZLER:

15 Q       Now Mr. Batson testified that he believed this one, the  
16 north percolation ponds, were also covered with an earthen cap  
17 that CFAC has been maintaining. Is that correct?

18 A       No. That's incorrect.

19 Q       All right. Which waste unit do we move to next?

20 A       Why don't we look at the west landfill.

21                  MS. STEPHAN: (Complied with request.)

22                  THE WITNESS: So the west landfill, it's my opinion  
23 that the waste within the west landfill is not an ongoing  
24 source of cyanide and fluoride to groundwater. It's been  
25 capped with an impermeable layer or an impermeable cover. The

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 proposed action moving forward is to maintain that cap. And  
2 so maintaining that cap that was put in in the '90s is  
3 certainly an expected cost of doing business moving forward.

4 BY MS. WURTZLER:

5 Q Now there was some testimony that the cap might not be  
6 adequate on the west landfill. Have you seen anything to  
7 indicate that there is any basis for concern about the  
8 adequacy of that cap?

9 A Well, the RI and the FS did not identify that. I mean,  
10 the FS said that there was maintenance of the cap, but they  
11 did not indicate that the cap needed to be replaced or  
12 repaired.

13 I believe there's been some discussion of the fact that  
14 groundwater could migrate laterally into that. However, I  
15 don't see anything in the RI that would suggest that that's  
16 taking place. It's speculative. It could happen. But the  
17 data, the hard information in the RI indicates that  
18 groundwater is migrating downward in the permeable soil, not  
19 laterally. There's no indication that there's an impermeable  
20 layer that's causing the groundwater to migrate laterally.  
21 There's no indication that there's a perched groundwater on  
22 top of that. And, in addition, when they constructed the  
23 landfill, there was no indication that there was groundwater  
24 or seeping into the excavation.

25 Q And they essentially constructed that landfill by digging

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 at grade back into the cliff wall, right?

2 A So it's a hillside, so they notched into the hill. I  
3 think they were borrowing sand and gravel for construction.  
4 So if you think of a daylight basement house, one side of the  
5 house is at grade. The other side has got a basement wall,  
6 and that's essentially the way they built the west landfill.  
7 One side was grade, so they would just drive in there, dump  
8 the material, and then drive out and eventually fill that up.

9 If there was groundwater migrating into that material,  
10 you would have expected to see that seeping from the  
11 excavation cut, and you would have expected to see groundwater  
12 or, at that point, surface water within the area they filled,  
13 and I did not see any evidence of that in the record.

14 Q Okay. And let's see. Do we have a -- do you want to --

15 A Let's do the wet scrubber sludge pond.

16 MS. STEPHAN: (Complied with request.)

17 BY MS. WURTZLER:

18 Q Okay.

19 A So the wet scrubber sludge pond is an ongoing source of  
20 cyanide to groundwater. It's not capped. So in my expert  
21 report, I identified the alternative of placing a cap on that  
22 as a remedial action, as something that you would expect to do  
23 under a cleanup. If you look at it from a lens of if this  
24 were not under an NPL, and this were not a CERCLA cleanup, and  
25 this were a closure solely, then unequivocally you would have

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 to cap and cover that scrubber sludge pond.

2       So looking at it from an operational standpoint, yes,  
3 they would expect to cover it. So that would be my opinion,  
4 that closing a facility, covering the wet scrubber sludge pond  
5 would be an operational cost.

6 Q      And you would do that capping of the wet scrubber sludge  
7 pond regardless of whether the entire site is listed on the  
8 National Priorities List and is a Superfund site?

9 A      Correct. This is sort of a but-for. If this were not a  
10 Superfund side, you would be capping the wet scrubber sludge  
11 pond.

12           And then we can look at the south percolation ponds.

13           MS. STEPHAN: (Complied with request.)

14 BY MS. WURTZLER:

15 Q      Okay.

16 A      So the south percolation ponds are built on a side  
17 channel off the Flathead River. They put a dam in, and they  
18 diverted the river. They discharged millions of gallons a day  
19 of wastewater into those ponds.

20           So there was always a risk of that dam breaching and  
21 washing that whole thing away, so they had an operational  
22 requirement to maintain that dam and maintain those ponds so  
23 that they didn't have a massive and unexpected release.

24           So at the point the facility shut down, they continued to  
25 have that responsibility to maintain those ponds. And so I

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 think what they -- to close those ponds, pull the dam out, fix  
2 the dam, whatever the selection is, is an operational cost  
3 that they had a duty to maintain once the facility continued  
4 operations -- or discontinued operation.

5 THE COURT: Let me ask you a question. What do you  
6 make of the fact that the river changed after they had closed  
7 the operation down and the river and the bank changed  
8 completely, putting at risk those ponds? Does that alter your  
9 view?

10 THE WITNESS: No. I mean, rivers change. That's  
11 what rivers -- it's a dynamic environment. And so if that  
12 change had occurred during operations, they would have had to  
13 fix it to keep the river out of the pond as part of their  
14 operations.

15 Now that they've shut down, the river has changed,  
16 they still have that same duty to maintain and protect that  
17 pond from being washed out by the change of the river. So it  
18 would be exactly the same thing during operations and after  
19 operations.

20 THE COURT: So it had nothing to do with the  
21 Superfund site, the obligations?

22 THE WITNESS: Again, it's a but-for argument. If  
23 this were not a Superfund site, they would absolutely  
24 unequivocally have to do that as part of an operational  
25 closure.

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 THE COURT: Counsel.

2 BY MS. WURTZLER:

3 Q All right. Let's turn to your second opinion, and is  
4 your second opinion you're gonna talk about today that  
5 groundwater contamination cannot be evaluated based solely or  
6 primarily based on SPL volume?

7 A That's correct.

8 Q And why is that?

9 A The site cleanup is required because of concentrations of  
10 cyanide in groundwater. And so the exposure pathways are  
11 based on parts per billion in the groundwater, and if we  
12 consider a part per billion as one drop in an Olympic-sized  
13 swimming pool, so I think the current numbers that are in the  
14 RI/FS are 200 parts per billion for a drinking water source  
15 and five parts per billion for where the groundwater  
16 discharges into the surface water down here at the backwater  
17 seep area.

18 Q Yeah. And what compound is that for?

19 A And that's for cyanide.

20 So five drops in an Olympic swimming pool. So that is  
21 not something that is specific to a volume of SPL. I mean,  
22 SPL is a likely source, but there are other likely sources on  
23 the site as well. They generated millions of gallons of  
24 process wastewater daily that contained cyanide. That's an  
25 ongoing source. They discharged untreated leachate water.

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 The pot diggings. Those were ongoing sources.

2 In addition, not all of the potliners are a source of  
3 contamination. The east landfill, the center landfill have  
4 potliners in it, and both -- neither of those are identified  
5 as sources of contamination. So using the volume of spent  
6 potliners as a basis for the cleanup action is not  
7 appropriate. There's too many other variables that are  
8 defining the concentrations of cyanide in groundwater.

9 Q So essentially one can produce 200 micrograms per liter  
10 or 200 parts per billion of cyanide from something other than  
11 the potliners?

12 A That's correct. There's process wastewater, the leachate  
13 water that was disposed of, the pot diggings, the materials  
14 that were released inside the building that were discharged  
15 into either dry wells or into the stormwater system.

16 Q Has the distribution of cyanide concentrations in  
17 groundwater changed over time?

18 A It has.

19 Q And how do you know that?

20 A So I looked at data that was collected in 1982-1985 from  
21 a number of groundwater monitoring wells. And if we look at  
22 the map, there's a well right about here (indicating).

23 Q Yeah. Do you want the features highlighted, or do you  
24 want just the --

25 A Let's turn off the features.

*JEWETT DIRECT EXAMINATION BY WURTZLER*

1 MS. STEPHAN: (Complied with request.)

2 THE WITNESS: So there's a well right about there  
3 that in 1982-'85, had about 250 parts per billion cyanide.  
4 There were wells down over here (indicating), over here, and  
5 down here that did not; had basically 20 parts per billion or  
6 were nondetect. So if you were to draw a plume -- I guess I  
7 can't draw on this.

8 BY MS. WURTZLER:

9 Q Yeah, you can. There's a little pencil up in the upper  
10 right-hand corner.

11 A Oh, there is. Okay.

12 So if you, if you consider where the plume was in  
13 1982-'85 era, it's probably something about like that  
14 (indicating). Maybe like that. Roll forward to the 2015-2016  
15 RI/FS data, now the concentrations are being formed further  
16 afield, downgradient, so the plume is now something  
17 (indicating) like that.

18 So as you can see, between 1982-'85 and 2015-2016, the  
19 nature and extent of cyanide significantly increased in a  
20 larger plume and higher concentrations in the plume.

21 Q So it got bigger and worse?

22 A It got bigger and worse.

23 Q And this occurred during the CFAC ownership and  
24 operation?

25 A That's correct.

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 Q And does it make any difference for the migration of the  
2 plume that there were periods in the CFAC ownership time where  
3 they didn't operate the plant?

4 A No, I don't believe so. I think the wastewater scrub  
5 pond is an ongoing source of cyanide contamination to  
6 groundwater. It has never been capped. So that was an  
7 ongoing source of contamination migrating to groundwater.  
8 There was residual contamination within soil and groundwater  
9 that were continuing to migrate. So by not addressing that  
10 during the CFAC period, even though they weren't operating,  
11 was still an ongoing source and migration of contamination.

12 Q And there would still be contaminants in the north perc  
13 ponds, and there would still be stormwater going in there,  
14 right?

15 A That's correct.

16 MS. WURTZLER: I have no further questions.

17 THE COURT: Cross-examination, Mr. Ament-Stone?

18 MR. AMENT-STONE: Yes. Thank you, Your Honor.

19 CROSS-EXAMINATION

20 BY MR. AMENT-STONE:

21 Q Good morning, Mr. Jewett.

22 A Good morning.

23 Q I wanted to first understand your current Opinion No. 1.  
24 You're not providing any opinion on CFAC's ability to recover  
25 any costs under CERCLA, are you?

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 A No, I'm not.

2 Q Okay. And your original Opinion No. 1 was labeled, "The  
3 sources of contamination detected in soil and groundwater at  
4 the Site are the raw materials used and industrial wastes  
5 generated," et cetera, et cetera, but by aluminum production.  
6 That was your Opinion No. 1, right?

7 A Well, I don't think I said "et cetera," but, yeah, that's  
8 basically it.

9 Q Right. Right. Of course.

10 Okay. So -- and you're not providing any opinion on  
11 whether, whether CFAC did or did not satisfy certain  
12 regulatory requirements, are you?

13 A No.

14 Q Okay. Nor whether Anaconda or ARCO satisfied any  
15 applicable regulatory requirements?

16 A That's correct.

17 Q Okay. Now you also referred to Mr. Batson's earlier  
18 references to some caps at the asbestos landfills, right?

19 A That's correct.

20 Q And at the percolation ponds, right?

21 A Yes.

22 Q Now those opinions were -- or, rather, those facts were  
23 stated in some of his earlier expert reports, correct?

24 A That's correct.

25 Q He didn't state those facts in testimony?

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 A No, I believe you're correct.

2 Q Okay. And you also referred to operational requirements  
3 at the wet scrubber sludge pond, right?

4 A Yes.

5 Q But in your original two reports, your March 25  
6 replacement report and your March 25 rebuttal report, you  
7 didn't refer to any operational requirements at the wet  
8 scrubber sludge pond, did you?

9 A Well, in my expert report, what I was looking at was what  
10 was necessary under CERCLA to protect human health and the  
11 environment. So I looked at all of the other operational  
12 facilities. They were not sources, so that was an easy one.

13 The wet scrubber sludge pond does need protection for  
14 human health and the environment. So what I'm saying here  
15 today is if you look at it from a lens of if this were not a  
16 CERCLA site and requiring cleanup, would you have had to close  
17 that wet scrubber sludge pond as part of doing business? And  
18 my opinion there is yes, it would be.

19 Q I see. But your chart in your original replacement  
20 Jewett report on March 25, 2020 -- and, for the record, this  
21 is on pages 5, 6, into page 7 -- has separate columns for  
22 operational requirement and CERCLA response, right?

23 A That's correct.

24 Q And you refer, in "CERCLA Response," in that column, to  
25 whether you believe a response action is likely?

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 A That's correct.

2 Q And in "Operational Requirement," you list any applicable  
3 operational requirements?

4 A That's correct.

5 Q And there's no operational requirement listed for the wet  
6 scrubber sludge pond.

7 A That's correct.

8 Q Okay. We will get to your Opinion No. 2, but I also  
9 wanted to ask -- I was a bit surprised to hear that you still  
10 hold the view that the west landfill is not an ongoing source  
11 of groundwater contamination. Did I understand that's still  
12 your testimony?

13 A The waste within the landfill is not an ongoing source of  
14 contamination.

15 Q But the landfill is an ongoing source of contamination?

16 A Well, this is where we'll need to talk a little bit of  
17 detail here.

18 So the waste itself is the landfill. Beneath the  
19 landfill there is between 70 and 100 feet of soil down to the  
20 groundwater. The material beneath that waste, that soil, is  
21 not the landfill. So it's my opinion that the waste that's  
22 within the landfill is capped. There's no longer a driver to  
23 take that contamination down, and so that is not a source.  
24 The residual contamination that may exist within the soil  
25 beneath the landfill is, in all likelihood, an ongoing source.

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 Q So your view is that there is contamination moving  
2 beneath the west landfill?

3 A Well, there's a data gap. You know, there's no actual  
4 samples collected from beneath the landfill to determine what  
5 the concentrations are within that soil column, whether that  
6 soil is available for solution into groundwater. However,  
7 based on the data that does exist, it's likely that there is  
8 residual contamination within that soil that comes into  
9 contact with groundwater as the groundwater goes up and down.

10 Q And groundwater in that part of the site flows to the  
11 southwest, doesn't it?

12 A That's correct.

13 Q Okay. So if there is contamination moving beneath the  
14 west landfill, it would not be coming from the south; it would  
15 be coming from the northeast?

16 A That's correct.

17 Q Okay. Now EPA, for one, has concluded that the west  
18 landfill is a continuing source of groundwater contamination,  
19 has it not?

20 A I believe the RI/FS has concluded that.

21 Q And in the feasibility study -- just for the record, this  
22 is Exhibit 868 at Bates-numbered page CFAC 0556778 -- you can  
23 pull that up, if you want, 0556778.

24 MR. BELINSKIY: (Complied with request.)

25 ///

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 BY MR. AMENT-STONE:

2 Q So you can see here at the top, Mr. Jewett, it refers to  
3 the west landfill as serving as a continuing source of  
4 contamination, right?

5 A That's the RI. That's correct.

6 Q No, I'm sorry, Mr. Jewett; this is the feasibility study.

7 A Oh, this is the FS. I'm sorry. So, yes, that is the FS.

8 Q Okay. Which has been approved by the EPA?

9 A They've accepted it, that's correct.

10 Q Okay. And then on page 0556830, on this page isn't there  
11 a more detailed description of the mechanism whereby the west  
12 landfill serves as a continuing source of contamination?

13 A Well, this is talking about the volumes of waste, but,  
14 again, it's my opinion that there needs to be a migration  
15 pathway to drive the waste -- or the contaminants from the  
16 waste to the groundwater. So my conclusion is by having  
17 placed an impermeable cap over that waste, that precludes that  
18 migration. So there is nothing pushing that contamination  
19 down.

20 It may be that we're parsing between the definition of  
21 what the landfill is or not, but it's my opinion that the  
22 waste itself is not an ongoing source of contamination. It's  
23 more likely than not the residual contamination within the  
24 soils beneath that waste that's the ongoing source of  
25 contamination.

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 Q Okay. And you haven't expressed an opinion in this case  
2 as to why these soils beneath the west landfill would be  
3 contaminated?

4 A I don't have a specific opinion on that.

5 Q Now in your report, if we're still using that, you refer  
6 to the west landfill as approximately 71 feet above  
7 groundwater, right?

8 A Yes. I got that from the RI.

9 Q Right. And I believe you got that from a specific column  
10 and a specific table of the RI, which, we can pull up  
11 Exhibit 137.

12 MR. BELINSKIY: (Complied with request.)

13 MR. AMENT-STONE: All right. And this is not the  
14 easiest thing to read, so let's zoom in to the west landfill  
15 portion.

16 BY MR. AMENT-STONE:

17 Q So you see the column that says "Estimated" -- scroll up,  
18 Mr. Belinskiy.

19 MR. BELINSKIY: (Complied with request.)

20 BY MR. AMENT-STONE:

21 Q "Estimated Bottom of Landfill to GW (ft)"?

22 A I do.

23 Q And it says 71?

24 A Correct.

25 Q So that's the figure you were using?

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 A Yes. I looked at it in detail as well, but that's the  
2 figure I referenced in my expert report.

3 Q And that figure was carried over from the RI/FS work  
4 plan, wasn't it?

5 A Well, the RI is the fundamental basis of information, so  
6 I relied on the RI.

7 Q Right. And in this case you relied on the RI's carrying  
8 forward a number from the RI/FS work plan?

9 A Well, where the data came from, I didn't parse that out.  
10 I have looked at the detailed monitoring data. I have a very  
11 clear understanding of this. But that information that I put  
12 in my expert report came directly from the RI.

13 Q Now let's go two columns to the right where it says  
14 "Minimum DTW (ft-bls)." Do you know what DTW refers to?

15 A I'm assuming it's depth to waste.

16 Q Okay. And what about "ft-bls"?

17 A Where? I've lost you. Where are you looking at?

18 Q Sorry. It's in the same column.

19 A Oh. Feet below ground surface.

20 Q Okay. And is it, is it, is it certainly depth to waste?  
21 Could it be depth to water?

22 A I think I misspoke. It is depth to water.

23 Q Okay. And does the RI use this figure of 35.52  
24 throughout its text?

25 A Well, the challenge with the depth to water is that it's,

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 it's measuring the depth from the ground surface, and the  
2 ground surface is sloped. So the depth to groundwater is  
3 gonna be different on one side of the landfill than it is on  
4 the other side of the landfill.

5       So what I did is I converted that information to  
6 elevation and compared that elevation to the expected  
7 elevation of the depth of waste. And based on that analysis,  
8 it appeared that there's a minimum of about 50 feet between  
9 the bottom of the waste and the high groundwater during the  
10 wet season and significantly greater distance in -- during the  
11 dry season.

12 Q       Okay. But my question was: In the text of the RI, did  
13 they use the 71 or the 35.5?

14 A       I don't recall. I, I pulled this number off of this  
15 table.

16 Q       Well, let's find out. Let's go to Exhibit 134 at  
17 page 139 of the PDF, which is Bates-stamped CFAC 0485998.

18       And I apologize; this isn't highlighted. We'll have to  
19 do a little visual searching here.

20                   MR. BELINSKIY: (Complied with request.)

21                   MR. AMENT-STONE: Right.

22 BY MR. AMENT-STONE:

23 Q       So here it says, The west landfill "reportedly is  
24 unlined, extends approximately 35 feet below surrounding  
25 grade."

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1       There's, I think, another reference here, yes, on the  
2 bottom here. You see where it says "groundwater is observed  
3 to have a minimum depth to water of approximately 36 ft-bls,"  
4 and then they use the 35.5 for the west landfill.

5       A      Well, they also, they also note that the maximum depth is  
6 105 feet bls, so I've got two numbers. And so what I did is I  
7 went to the table where they reference 71 feet and say, "Okay,  
8 here is the number we're working with."

9           Now the entire conversation here is based on -- the  
10 purpose of this conversation is whether groundwater ever  
11 actually comes into contact with the buried waste. And  
12 regardless of the depths that we're talking about, it's my  
13 analysis, and I believe it's consistent with Mr. Baris's  
14 opinion, that the groundwater never actually comes into  
15 contact with the buried waste.

16           So, therefore, having the buried waste capped, which  
17 precludes migration of water down through it, and the fact  
18 that groundwater never migrates up into the waste is, is the  
19 salient point.

20       Q      Okay. But there's no, there's no indication in the RI  
21 that groundwater does not rise up to the waste?

22       A      Well, I believe Mr. Baris commented that it does not.  
23 And the evidence that I've looked at, the elevations, the  
24 long-term groundwater monitoring that are provided in the  
25 appendix, support that conclusion.

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1           THE COURT: Mr. Ament-Stone, why don't we take the  
2 noon recess.

3           MR. AMENT-STONE: Thank you, Your Honor.

4           THE COURT: So back in 45 minutes --

5           THE REPORTER: Sure.

6           THE COURT: -- or an hour?

7           THE REPORTER: An hour would be great, actually.

8           THE COURT: You want an hour?

9           THE REPORTER: If that's all right.

10          THE COURT: Yep.

11          THE REPORTER: Okay.

12          THE COURT: We'll be back in at one hour, at 13:00.

13          We'll be in recess.

14          MR. AMENT-STONE: Thank you.

15          (Recess taken from 11:59:07 to 13:01:30.)

16          (Open court.)

17          THE COURT: Mr. Ament-Stone, you may continue your  
18 cross-examination.

19          MR. AMENT-STONE: Thank you, Your Honor.

20          BY MR. AMENT-STONE:

21          Q      Good afternoon.

22          A      Good afternoon.

23          Q      Now I believe I heard in your direct examination you  
24 acknowledged that the west landfill was built into a hill,  
25 right?

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 A That's my understanding, yes.

2 Q And it was not built with a side liner?

3 A That's my understanding, yes.

4 Q Okay. So it was not built with any sort of barrier that  
5 would keep out any water that came to the side at an angle,  
6 et cetera?

7 A I'm unclear what you're asking.

8 Q There was no barrier to the, to the side of the west  
9 landfill? There was only the cap on top?

10 A So are you asking me if there was groundwater that could  
11 migrate laterally into the landfill? There's no barrier to  
12 that? Is that the question?

13 Q There was no barrier to that. That was the question.

14 A That's correct.

15 Q Okay. Now you'd agree that the impacted soil about which  
16 you were testifying can extend beneath the waste to the  
17 maximum depth to groundwater, or, in other words, the bottom  
18 depth to groundwater?

19 A That's correct. I mean, it's somewhat supposition,  
20 again, because there's a data gap from beneath the landfill.  
21 There were no samples, soil samples, collected there. So that  
22 is my assumption.

23 Q So the answer is yes, that impacted soil can extend to  
24 the maximum depth?

25 A It could. I can't say yes because I don't have the data

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 to confirm that, but it could.

2 Q And by the way, you keep referring to this data gap.

3 You're not aware of any EPA request to sample within the west  
4 landfill or beneath it, are you?

5 A Not that I know of.

6 Q And no such request from Montana?

7 A Not that I know of.

8 Q Ever in the history of the site?

9 A Well, neither Montana or EPA were, were driving or  
10 developing the scope of work. That was really the RI. So in  
11 my experience in conducting RIs, you collect sufficient data  
12 to be able to evaluate appropriate cleanup alternatives. And  
13 based on that analysis, it appears that there is a data gap.

14 But you are correct that neither Montana nor EPA  
15 requested that information.

16 Q Okay. Thanks.

17 You talked a bit about the asbestos landfills, and I  
18 think you said they were covered with grass?

19 A (No response.)

20 Q It's true that they have a soil cover, isn't it?

21 A I don't know that. All I know is the record that I  
22 reviewed did not indicate that there was an intentional cover  
23 or cap placed on the asbestos landfills. And when I walked  
24 the site, all I observed was vegetation or grass growing on  
25 the, on the asbestos landfills.

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 Q No, no intentional cover over the asbestos landfills?

2 That's, that's your understanding?

3 A Well, I didn't see any document that says, "We are  
4 capping or covering the asbestos landfill." So there was no  
5 document that showed that that was, that was done as an  
6 engineering design or construction project, so I can't tell  
7 you specifically what overlies the asbestos landfill. My  
8 observations were that it appeared to be vegetative at the  
9 time I saw it.

10 Q Did the asbestos grow vegetation?

11 A No.

12 Q Okay. So at some point, someone put vegetation and soil  
13 over the asbestos?

14 A Well, not necessarily. I mean, maybe. Again, that's  
15 speculation. How the medium to support grass was there, I  
16 can't tell you.

17 Q Okay. Now you also mentioned -- you said that cyanide  
18 concentrations in the contaminated areas of the site have  
19 increased since the early 1980s?

20 A It appears so, yes.

21 Q I believe that was your testimony.

22 And you drew an expanded plume by hand?

23 A That's correct.

24 Q Okay. Now you know that in the 1980s there was no well  
25 immediately downgradient of the west landfill, right?

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 A Well, I think you have to define "immediate."

2 Q Well, was there any monitoring well adjacent to the  
3 southwest of the west landfill?

4 A No. There was MW-2 or TW-2, which was in a downgradient  
5 direction of the west landfill and the wet scrubber pond.  
6 Concentrations in 1982-'85 within that well, which was  
7 downgradient of both the wet scrubber pond and the west  
8 landfill, did exceed the now-current preliminary cleanup  
9 levels.

10 Q Let's be sure we are talking about the same thing.

11 Can we pull up Exhibit 84? And can we go to page 11 of  
12 the PDF, which, for the record, is Bates No. HYDRO 00081309?

13 MR. BELINSKIY: (Complied with request.)

14 BY MR. AMENT-STONE:

15 Q Do you recognize this as the Hydrometrics report from  
16 1993?

17 A From 1993, I do.

18 Q And you've seen this map before?

19 A I have.

20 Q Okay. So you mentioned MW-2, I believe, right?

21 A That's correct.

22 Q And that, if I'm, if I'm not mistaken, can you identify  
23 that on that map and can you draw a little circle around it?

24 A It's right (indicating), it's right there.

25 Q Okay. So MW-2 is down by the main plant a good ways

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 south of the landfills that we're talking about?

2 A Correct. So the direction of groundwater flow is  
3 generally this direction (indicating).

4 Q Um-hmm.

5 A So the plume I drew was essentially somewhere in here  
6 (indicating), given the fact that there is a limited data set.

7 But the point that I was trying to make is within this  
8 plume, even if there were TW-17 or those wells closer, they  
9 were within that area. My comment was that the areas  
10 (indicating) down here and down here were not in that, in the  
11 1982-to-'85 time period.

12 Q Okay. Can we, can we clear your circle so this doesn't  
13 get too visually confusing?

14 A Yes.

15 Q Thank you.

16 So you've identified MW-2 which we can see is down by the  
17 main plant. But in the 1980s, there was no TW-17, was there?

18 A That's correct.

19 Q And as we see here -- I'll draw the circle this time --  
20 TW-17 is due west of the sludge pond and adjacent to it, and  
21 it is exactly southwest of the west landfill and adjacent to  
22 that. It is right next to, essentially, both of those  
23 features; isn't that right?

24 A That's correct.

25 Q Okay. And that was constructed in 1993, right?

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 A That's correct.

2 Q Okay. So when you're comparing the findings of  
3 groundwater monitoring in the 1980s to more recent findings,  
4 you're using, as you said, a very limited data set, right?

5 A That's correct.

6 Q And you can't know what the cyanide concentrations were  
7 immediately next to these two features because there was no  
8 TW-17?

9 A That's correct.

10 Q Okay. And just so that we have a better understanding of  
11 what things look like today, can we look at Exhibit 732?

12 MR. BELINSKIY: (Complied with request.)

13 BY MR. AMENT-STONE:

14 Q I believe this is just a map of all the current well  
15 locations as of when this was made. And here we see a much  
16 more extensive network of groundwater monitoring wells,  
17 including the wells that CFAC put in in the late 1980s and  
18 early 1990s, right?

19 A That's correct.

20 Q Okay.

21 A That's correct.

22 Q And we can see here that by far the highest  
23 concentrations of -- what is this, cyanide? -- of cyanide are  
24 clustered in this ring immediately southwest of the west  
25 landfill and west of the wet scrubber pond, right?

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 A That's correct. But my point is that -- and I'm not  
2 quibbling with you on that. My point is that these wells  
3 (indicating) here and down here -- it doesn't really matter --  
4 but these wells here, in the 1982-to-'85 era were not above  
5 the 200 ppb; whereas, today they're over 500 ppb.

6 So the issue I'm pointing out to is that the extent of  
7 the plume expanded further to the south, southwest.

8 Q Okay. And do contaminants tend to disperse over time?

9 A Yes.

10 MR. AMENT-STONE: Okay. We can take that down, I  
11 think.

12 MR. BELINSKIY: (Complied with request.)

13 BY MR. AMENT-STONE:

14 Q Let's talk a bit about your Opinion No. 2, and let me  
15 know if I'm stating this correctly. I understood your Opinion  
16 No. 2 to be one should not evaluate groundwater contamination  
17 based solely on SPL volumes, right?

18 A That's correct.

19 Q Okay. So let's, let's do that. Let's evaluate  
20 groundwater contamination not based solely on SPL volumes, and  
21 I'm gonna do a little arithmetic with you if that's all right.

22 Let's -- so I will hand this to opposing counsel, and I  
23 will hand a copy to the clerk to hand to you, if that's all  
24 right.

25 Should I hand one more for the witness or for the Court?

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 THE COURT: If you want him to look at it.

2 MR. AMENT-STONE: All right.

3 MR. LAUER: Give it to the clerk.

4 MR. AMENT-STONE: (Handing.)

5 THE CLERK: Thank you. (Handing.)

6 MS. WURTZLER: (Standing.)

7 THE COURT: Do you have an objection to this?

8 MS. WURTZLER: Yes. This was not disclosed 48 hours  
9 before as the parties had agreed.

10 THE COURT: Do you want to describe what it is?

11 MR. AMENT-STONE: Yeah. This is arithmetic  
12 regarding number --

13 THE COURT: Whose arithmetic?

14 MR. AMENT-STONE: Huh?

15 THE COURT: Whose arithmetic?

16 MR. AMENT-STONE: I'm sorry; this is my own  
17 arithmetic, actually.

18 THE COURT: When did you do it?

19 MR. AMENT-STONE: Last night.

20 THE COURT: You're using it for what purpose?

21 MR. AMENT-STONE: I'm using it to discuss --

22 THE COURT: Cross-examine?

23 MR. AMENT-STONE: Yeah, to cross-examine Mr. Jewett.

24 THE COURT: The objection is overruled.

25 MR. AMENT-STONE: Yeah.

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 BY MR. AMENT-STONE:

2 Q All right. So, Mr. Jewett, I want to be sure that I  
3 understand. Your opinion as reflected in your original  
4 report, at least, is that cyanide contamination that is  
5 observed in the RI from the west landfill/WSSP, wet scrubber  
6 sludge pond, area can be attributed at least in part -- or is  
7 it largely? -- to CFAC's activities in the wet scrubber sludge  
8 pond?

9 A So let me clarify that question. Are you asking me: Are  
10 the concentrations of cyanide that are currently detected in  
11 groundwater, is it my opinion that they're solely coming from  
12 CFAC? Is that what you're asking me?

13 Q No, I don't think I said "solely." My admission here,  
14 it's a little unclear in your report. Is it your opinion that  
15 they can predominantly be attributed to CFAC's activities in  
16 the wet scrubber sludge pond?

17 A I think that the sources of contamination are  
18 attributable to operations of both Atlantic Richfield and  
19 CFAC. I think that the work that CFAC did contributed to that  
20 contamination and increased that contamination.

21 Q And you've never expressed an opinion as to the relative  
22 importance of the SPL disposed of by Anaconda and ARCO in  
23 contributing to cyanide versus CFAC's activities, have you?

24 A The relative contribution, it's not -- the relative  
25 question here is concentrations of cyanide in groundwater that

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1 represent a risk to human health and the environment. So  
2 we're talking 200 parts per billion, which is a fairly low  
3 number.

4       So the analysis that you printed, provided me here, is a  
5 flux analysis, and that's not germane to determining whether  
6 the concentrations within groundwater represent a risk to  
7 human health and the environment or what the contributing  
8 sources to that are. They're somewhat of a comparative. But  
9 it's my assumption or my conclusion that the concentrations of  
10 cyanide detected in the wet scrubber sludge pond and  
11 downgradient of the wet scrubber sludge pond are a result of  
12 CFAC's operations.

13 Q       Okay. Well, so I don't have a degree in geology or  
14 anything scientific, but do you recognize these figures as  
15 reflected in documents that have been produced in this case?

16 A       I do.

17 Q       Okay. So let's begin, if we may, with leachate. There  
18 were three documented discharge events of leachate at the wet  
19 scrubber sludge pond by CFAC, weren't there?

20 A       That's correct.

21 Q       Okay. And the first one that you're aware of, or I think  
22 that any of us are aware of, is the 1987 event; is that right?

23 A       That's correct.

24 Q       Okay. And did that involve a discharge of 400,000  
25 gallons?

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1 A I believe so, yes.

2 Q And if you need -- by the way, if you want to see the  
3 source documents at any point, I'm happy to do that.

4 And am I right that a gallon is approximately 3.78541  
5 liters?

6 A That is correct.

7 Q Actually I don't think that's approximate. I think  
8 that's exact.

9 So if we take 400,000 and we multiply it by 3.78541, what  
10 I got was 1,514,164.71 liters of leachate.

11 A We can walk through the math here if you want, but that  
12 is correct.

13 Q Okay.

14 A I mean, I'm not running it through a calculator, so I am  
15 assuming that that math is correct.

16 Q Yeah. I wasn't sure if the Court would want me to give  
17 you a calculator for this.

18 And am I also right that the cyanide concentration of  
19 that 1987 discharge was .479 milligrams a liter?

20 A I believe that's correct.

21 Q Okay. And, again, if at any point you want to see the  
22 source document, happy to show you.

23 That, for the record, is Exhibit 53, which has already  
24 been testified about.

25 Now when I multiply .479 by 1,514,164.71, I got

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 725,285 milligrams of cyanide. Does that seem about right?

2 A It does. What's lacking in the next step is converting  
3 that mass of cyanide into parts per billion in groundwater,  
4 because the mass of cyanide is not driving the cleanup. It's  
5 the concentrations in groundwater. So for this to be useful,  
6 we should take that mass of cyanide and convert it into a  
7 parts per billion in groundwater.

8 Q Okay. And do you know how to convert milligrams per  
9 liter into parts per billion?

10 A Well, there's a number of assumptions here to do that,  
11 and, in the flux analysis, that's summarized at the 1.6 days  
12 max. Doing a flux analysis takes the hard data, the parts per  
13 million that's based -- or parts per billion that's based on  
14 an analytical laboratory result, and then it makes some  
15 assumptions. It assumes how much of that parts per billion is  
16 in the water column, and then it makes an assumption of how  
17 quickly that water column is moving through. So you're  
18 introducing significant error in your analysis to then convert  
19 that back to parts per million.

20 So the analysis that I did was based solely on the hard  
21 data that was collected from the wells, collected from the  
22 groundwater samples, and did that analysis. This flux  
23 analysis is useful when you're evaluating a cleanup  
24 alternative. You're gonna pump water out of the ground.  
25 You're gonna treat that water. You want to know how much

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1 filtration system or whatever you need.

2 It's not germane to determining whether a source is  
3 presenting a risk to human health and the environment based on  
4 the distribution of parts per billion in the groundwater.

5 Q Okay. And when -- you know, I will concede that this  
6 involves some simplifying assumptions.

7 Now when you say your analysis is based on hard data, you  
8 didn't do any quantitative comparison of CFAC's discharges  
9 with ARCO's or Anaconda's, did you?

10 A Well, I'm not sure how you would do that. What I did is  
11 I looked at the nature and extent of cyanide in groundwater  
12 relative to known operations and sources to determine whether  
13 the concentrations detected in groundwater are proximate to a  
14 potential source, downgradient from a source. So that  
15 calculation I did. In comparing a relative load to the  
16 groundwater from potential other sources, there are so many  
17 assumptions in that analysis that it would be fraught with  
18 error.

19 Q Okay. So your analysis involved looking at a few  
20 documents regarding CFAC's activities and noting that they  
21 could be contributing, right?

22 A Well, I looked at more than a few. I mean, I looked at  
23 the record. And so I looked at -- as I discussed earlier, I  
24 developed a conceptual site model based on the documents that  
25 I reviewed, the historic operations, the data set that was

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1 available to evaluate whether there were or were not evidence  
2 of sources.

3 Q And where in your report would I find any equation or any  
4 arithmetic comparing these documented disposals by both  
5 parties in the same areas of the site?

6 A Well, I'm not sure that it's an arithmetic equation.  
7 What we're looking at is nature and extent, and nature and  
8 extent is based on the analytical data. Where were those  
9 samples collected? When were they collected? What was going  
10 on at the facility? So it's a weight of evidence evaluation  
11 using all of the information available. So there's no  
12 arithmetic equation that would be appropriate to simplify it  
13 down to that.

14 Q I see. Now you didn't do arithmetic, but Roux did. And  
15 in the RI report, they reported 2,002,564 milligrams of  
16 cyanide daily emanating from beneath the area of the west  
17 landfill and the wet scrubber sludge pond. And for the  
18 record, that's Table 24 of the RI, which is in Exhibit 867 at  
19 page 185. It is also in Exhibit 848 at Slide 43.

20 You remember that table?

21 A Yes, and I, I acknowledge the math. But as I pointed out  
22 earlier, that equation is just taking the hard data, the  
23 actual analytical results from specific wells, converting it  
24 into a mass, making an assumption of how that mass is  
25 distributed within the water column, making an assumption of

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1 how wide that water column is, making an assumption of how  
2 quickly that water column is moving through. So you're  
3 looking at the same data set, but you're putting it into a  
4 different metric with more error introduced into the equation.

5 So I acknowledge that this is -- that the math is  
6 correct, assuming their assumptions are correct. So that  
7 would be my conclusion.

8 Q You're saying there's more error introduced into an  
9 equation that involves arithmetic as opposed to the complete  
10 absence of any equation?

11 A Any equation is based on the variable that you put into  
12 the equation. And when you have known data, the parts per  
13 billion, that's based on a lab result. The other variables in  
14 the equation are: Where is that distribution within the water  
15 column?

16 So the flux analysis that Roux made, consistent with  
17 industry standards, really, was assuming that that mass was  
18 distributed throughout the water column. They didn't do  
19 sampling at different levels, at different depths. So, yes,  
20 the math is correct, but the inputs to the data, inputs to  
21 that math is where the error can be introduced.

22 Q Okay. Well, let's go through a little bit more of this  
23 math. I will try not to belabor this too much.

24 But then there's the 1989 discharge event which is  
25 documented in Exhibit 56. That was 150,000 gallons, and I get

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1 that as 567,811.77 liters. Does that sound about right to  
2 you, Mr. Jewett?

3 A It does.

4 Q And that a cyanide concentration documented at  
5 3 milligrams per liter, 3 times 567,811.77, I got  
6 1,703,435 milligrams of cyanide.

7 A Right. And so you take the 1.7 million milligrams of  
8 cyanide, how many drops in a swimming pool is that to create  
9 200 parts per billion? Because that's the number that  
10 matters. So you have to take that mass and convert it into a  
11 concentration within the groundwater that then can make it to  
12 the surface water. That's the driver for the cleanup. That's  
13 the pathway. That's the risk analysis.

14 So that math is, I'm assuming, correct. The conversion  
15 to a parts per billion is the question that matters when  
16 you're evaluating whether a source is a -- whether it's a  
17 source of contamination that presents a risk to human health  
18 and the environment.

19 Q Okay. And then as for the 1994 discharge event, that is  
20 documented in Exhibits 57 and 132. That discharge event, if  
21 I'm not mistaken, was 400,000 to 500,000 gallons. Does that  
22 sound right?

23 A That sounds about right.

24 Q Okay. Which I got as 1,514,164.71 liters at the low end  
25 and, at the high end, 1,892,705.89 liters.

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1           And was that a cyanide concentration of .44 milligrams  
2 per liter?

3   A    I believe so.

4   Q    Okay. And .44 times 1,892,705.89 comes out to 832,791  
5 milligrams of cyanide using the high estimate of  
6 500,000 gallons of leachate. Sound right?

7   A    Yes.

8   Q    And then when I added all that up, I got  
9 3,261,511 milligrams of cyanide, which is a maximum estimate,  
10 assuming that the 1994 event was 500,000 gallons and that  
11 there was no attenuation of cyanide in the sludge.

12   A    Okay.

13   Q    And compared to the 2,002,564 milligrams of cyanide daily  
14 flux, that would mean this was enough cyanide to emanate over  
15 the course of 1.6 days, maximum.

16   A    There are a number of assumptions in here that, if we  
17 wanted to dive into it and really parse this out, would tear  
18 that to pieces. So as I pointed out, the foundation for the  
19 flux analysis has a number of assumptions, and as you pointed  
20 out, there is no attenuation, there is no retardation, there  
21 is no absorption in that equation which would change that  
22 number significantly.

23           So we're talking about a model here that based -- is  
24 based on a number of assumptions. The math is correct,  
25 assuming your input parameters are correct. My comment to you

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1 is I don't concur with those input parameters, and I think  
2 that there is a significant flaw in that analysis.

3 Q Is it your belief that there would have been -- that this  
4 cyanide would have grown over time?

5 A It's my belief that the cyanide would have an affinity to  
6 grab onto soil particles. A cyanide salt is highly soluble.  
7 Cyanide, they like to break apart. Cyanide wants to grab onto  
8 something else. So it would be my opinion -- or it is my  
9 opinion that the cyanide would more likely than not grab onto  
10 the soil as it migrated through that soil column, reside  
11 there, and be a continuing source of contamination to  
12 groundwater.

13 Q And with respect to CFAC's leachate disposals at the wet  
14 scrubber sludge pond, you've done nothing to quantify what you  
15 were just talking about?

16 A There's a significant data gap. If we had had soil  
17 samples collected beneath the wet scrubber sludge pond in  
18 order to determine what the concentrations of cyanide are in  
19 that soil column, if there was a partitioning or leachate  
20 analysis done of that soil column, we could have more data to  
21 make that assumption.

22 So without that information, there's no way to be able to  
23 quantify that. So I am assuming, based on my experience  
24 working with releases of this caliber, that it's -- it's  
25 always been my experience that there is a residual

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1 contamination trail within the soil column as it goes to  
2 groundwater.

3 Q Now apart from the leachate disposals from the leachate  
4 ponds constructed by ARCO in 1980 for the east landfill,  
5 previously was leachate permitted to flow regularly through  
6 the groundwater system?

7 A Do you mean from a specific point or do you mean anywhere  
8 on the site?

9 Q Whence it was generated. Did it flow through the  
10 groundwater system?

11 A Leachate is produced from surface water that infiltrates  
12 through waste. So prior to the capping of the west landfill,  
13 there would have been leachate migrating out of the landfill,  
14 yes.

15 Q And you, and you previously testified it likely would  
16 have migrated to groundwater, right?

17 A That's correct.

18 Q Okay. And some of that leachate would have come from the  
19 roughly 129,000 to 135,000 tons of SPL that ARCO disposed of?

20 A In the west landfill? Is that what you're saying?

21 Q Well, that's a combined figure for the two landfills.

22 A Which two landfills?

23 Q The west and the center landfill.

24 A Well, the center landfill was capped, so prior to the  
25 capping of the center landfill, there may have been leaching

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1 from that material, so yes.

2 Q When, when SPL was being put in the center landfill?

3 A And prior to capping.

4 Q Right.

5 A Yes.

6 Q Right. And just for a clear record, the west and center  
7 landfills were both capped around 1981, right?

8 A I believe that's correct.

9 Q Okay. Now, again, with respect to the wet scrubber  
10 sludge pond, you -- is it your opinion that the pot diggings  
11 placement by CFAC in the 1990s is a, is a significant cause of  
12 groundwater contamination? It's very hard to pin down,  
13 Mr. Jewett. Are you saying it's a significant cause or it's  
14 just a possible cause?

15 A It's a contributing source of contamination to  
16 groundwater.

17 Q Okay. And beyond saying it's contributing, you haven't  
18 tried to quantify how much of the current problem is  
19 attributable to the pot diggings?

20 A Again, there is insufficient information to do that, so  
21 it's my opinion that there was sufficient cyanide within those  
22 pot diggings that were left there for approximately four  
23 years, exposed to the environment, to enable and allow  
24 migration of cyanide down to the groundwater, contaminate the  
25 soil column, and enter groundwater.

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1 Q Okay. Now cyanide is a molecule containing carbon and  
2 nitrogen, right?

3 A That's correct.

4 Q And if there was no carbon, you couldn't have cyanide?

5 A What do you mean?

6 Q It's a, it's a poorly phrased syllogism.

7 Since cyanide requires carbon, if there is no carbon  
8 present, you couldn't have cyanide?

9 A Well, the chemical composition of carbon -- or cyanide is  
10 carbon and nitrogen. Without carbon, there is no cyanide.

11 Q Right.

12 A You just have nitrogen, I guess.

13 Q Right, right, right.

14 Now you've seen documentation, haven't you, that only  
15 4 to 6 cubic yards of the 1,800 total cubic yards of pot  
16 diggings had carbon?

17 A Well, carbon is irrelevant. It's whether it has cyanide  
18 or not.

19 Q Fair enough. But it can't have cyanide if it doesn't  
20 have carbon?

21 A No, that's not right. By that point it's already  
22 cyanide. It becomes cyanide in the process. A carbon  
23 molecule is released from the briquettes. It bonds with the  
24 nitrogen molecule, and it becomes cyanide. So that cyanide  
25 can impregnate the carbon paste. It can impregnate the

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1       bricks. So the fact that there's no carbon does not mean  
2       there's no cyanide. Your question is convoluted.

3       Q       Okay. So your position or assumption is that there was  
4       some, what, some nitrogen in the noncarbon pot diggings that  
5       bonded with a carbon?

6       A       No. The process of making up a pot is the electrolysis  
7       creates an environment that breaks molecules up. So there is  
8       free carbon coming out of the briquettes. Within that  
9       cryolite flux, it bonds with nitrogen from the atmosphere, and  
10      then it becomes cyanide. So at that point it's cyanide. So  
11      there is cyanide within the cryolite, within the carbon paste.  
12      That's where the cyanide comes from.

13      Q       But you've seen documentation, and this is Exhibit 58,  
14      that CFAC discovered there were pieces of carbon in the pot  
15      diggings, right?

16      A       Correct.

17      Q       And self-reported that to Montana the next day, right?

18      A       Yes.

19      Q       And then excavated all the carbon.

20      A       So the assumption there was that the carbon -- it was the  
21      carbon paste, I'm assuming -- had been impregnated by the  
22      cyanide. So their assumption is if they remove the carbon,  
23      they're removing the source of cyanide.

24      Q       Um-hmm. And did you make any assumption in your report  
25      about the chemical composition of the other 1,794 to

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1 1,796 cubic yards of pot diggings?

2 A I was more interested in the concentrations of cyanide  
3 that were detected in the soil beneath where the pot diggings  
4 had been placed. So once the pot diggings had been removed,  
5 they sampled those soils, and, lo and behold, cyanide was  
6 detected in that soil beneath the pot diggings. And that's  
7 the more important information for my analysis.

8 Q We will get there, Mr. Jewett.

9 Now when CFAC removed the carbon material, the total  
10 weight of it was 14,340 pounds, right?

11 A I believe that's correct.

12 Q Okay. And that's in Exhibit 58 at CFAC 0382821.

13 I guess we don't need to bring it up if you agree, but if  
14 anyone wants to see it, we can bring it up.

15 Now do you know where in the wet scrubber sludge pond,  
16 which is a pretty big feature, do you know where in that pond  
17 the pot diggings had been placed?

18 A I believe it was on the southeast portion of the ponds.

19 Q I think you are correct.

20 Can we look at Slide 848-56? This is Exhibit 848,  
21 Slide 56. And make it slideshow-sized.

22 MR. BELINSKIY: (Complied with request.)

23 MR. AMENT-STONE: There we go.

24 BY MR. AMENT-STONE:

25 Q I love this pot diggings placement. It has such a -- it

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1 looks like a whale. So that's, that's the southeast corner of  
2 the wet scrubber sludge pond, right?

3 A That's correct.

4 Q Okay. And groundwater in this part of the site flows to  
5 the southwest?

6 A The groundwater flows essentially this direction  
7 (indicating).

8 Q Okay. And I see you've indicated here that you believe  
9 the groundwater flow would have directed these pot diggings  
10 toward that well which is directly south of the wet scrubber  
11 sludge pond, right?

12 A Directly south, that's correct.

13 Q Now interestingly, that, that well is orange. The well a  
14 little bit to the west of it is orange, and orange on this  
15 chart indicates above 1,000 micrograms but less than 2,000  
16 micrograms per liter of cyanide, right?

17 A That's correct.

18 Q Okay. But then if we look due west of the wet scrubber  
19 sludge pond -- and you'd agree water does not flow in this  
20 part of the site, due east to west, right?

21 A Not based on this data set.

22 Q And this data set is the EPA-approved RI data set, right?

23 A Well, we have to be clear. The groundwater flow is not  
24 static, so it can be different directions at different times  
25 of year. So if we wanted to do a true analysis here, we would

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1 want to look at what's it like in the spring, what's it in the  
2 fall, what's it in the winter? So it varies somewhat.

3 In addition to that, there are pathways within the  
4 subsurface that may affect that direction. So it's not a  
5 straight-line analysis that you can hang your hat on.

6 Q Now the RI did sampling at several different seasons of  
7 the year, didn't it?

8 A That's correct.

9 Q And the RI is not the only document that says groundwater  
10 flows to the south or southwest in this area of the site, is  
11 it?

12 A Well, in general that is correct. We could, we could  
13 dive into it and look at the microchanges in specific areas.  
14 But I, I do acknowledge that it's -- if you're asking me is  
15 the groundwater gonna flow from the whale over to the -- along  
16 that yellow line, I have not seen data that would suggest  
17 that's occurring.

18 Q Okay. You've seen no documentation that there's a time  
19 of year when the groundwater flow is due east to west in this  
20 part of the site?

21 A That's correct.

22 Q Okay. Now returning to the numbers from Exhibit 58, the  
23 weight of the removed carbon material -- and that's the  
24 cathode carbon, right?

25 A I believe so, yes.

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1 Q And cathode carbon is regulated as K088 as Montana told  
2 CFAC, right?

3 A Yes.

4 Q Okay. And the weight of that removed material was  
5 14,340 pounds. Am I right that a pound is about 2,204.62  
6 metric tons?

7 A I believe that's correct, from my memory.

8 Q Not to be confused with U.S. tons, which are about  
9 90 percent of that?

10 A Right.

11 Q All right. So the math I did, and we can bring up the --  
12 my cross X document here, again, 14,340 times that converter  
13 of 2,204.62, I got 6.5 metric tons. Does that sound about  
14 right?

15 A That sounds about right.

16 Q Now since cathode carbon is regulated as K088, I thought  
17 we could perhaps assume a cyanide concentration of .1 percent,  
18 which was typical for SPL at the CFAC site?

19 A Okay.

20 Q And that yields 0.0065 metric tons of cyanide, doesn't  
21 it?

22 A That's correct.

23 Q And is a metric ton about -- well, actually, is it  
24 exactly a billion, with a "B," milligrams?

25 A I believe it is.

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1 Q So then that comes out to 6,500,000 milligrams of  
2 cyanide.

3 A Yes.

4 Q Okay. And, again, based on the flux from this area, that  
5 would be 3.2 days that the cyanide in the cathode carbon could  
6 last?

7 A That, I don't agree with you.

8 Q Uh-huh. And that, that's for the reasons you discussed  
9 earlier?

10 A That's correct.

11 Q Okay. And, again, that assumes no attenuation in the --

12 A It assumes a lot of things, that's correct.

13 Q And we've seen documentation, haven't we, that the  
14 calcium fluoride sludge itself did cause significant  
15 attenuation of both cyanide and fluoride?

16 A Well, that was a bench-scale test, so essentially in a  
17 column in a lab, that is true that it did show that. Whether  
18 that was actually true out in nature, there is no data to  
19 support that.

20 Q Now you're talking about one specific bench test which I  
21 believe is in Exhibit 54. Let's see if I have this right.

22 Right. So Exhibit 54, this is -- with respect to the  
23 1989 leachate disposal, CFAC is reporting the results of a  
24 bench test regarding the capacity of cyanide and fluoride to  
25 attenuate in the sludge, right?

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1 A That's correct.

2 Q And this is what you were referring to?

3 A Yes.

4 Q Okay. Now if we look at Exhibit 57, there is also  
5 mention here of, it says, "The calcium" in the calcium  
6 fluoride sludge "will tie up the excess fluoride as insoluble  
7 calcium fluoride," right?

8 A So where are you pointing to?

9 Q It is in the second paragraph, towards the bottom of the  
10 second paragraph.

11 A "Our plan is to drain" where the calcium "will tie up the  
12 excess fluoride as insoluble calcium fluoride"?

13 Q Right.

14 A I believe that is based on -- I don't know if that's  
15 based on the pilot test or not, actually.

16 Q Okay. And then there are a couple other documents that  
17 refer to this phenomenon. There's Exhibit 89. At the second  
18 page, this is in the -- this is a 1989 internal CFAC memo, and  
19 it says, in the second paragraph -- do you see what it says?

20 A I do.

21 Q So this is referring to the 1989 disposal. It said,  
22 "Cyanide levels of the south pond were 3 parts per million."

23 By the way, is that the same as milligrams per liter?

24 A No.

25 Q Okay. But the 1989 disposal of leachate was -- had a

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1 cyanide concentration of 3 milligrams per liter, didn't it?

2 A You know, I'd have to look at the data to answer that,  
3 but I believe that's correct.

4 Q And it says, "The state normally wants 1 part per million  
5 for land application, but the excess calcium in the calcium  
6 fluoride sludge made that a practical solution," right?

7 A Well, that's their conclusion, but, again, they never  
8 ground-truthed it. So in science you can do a bench-scale  
9 test; say, "Okay, does this work in a test tube? Great.  
10 Okay, let's go out and see if it works in nature."

11 And so they did the discharge, but they never actually  
12 assessed whether that worked the way they say it worked. So  
13 this is what it says in the report. I acknowledge that. But  
14 there's nothing to support whether that actually occurred or  
15 not.

16 Q And in science you usually try to quantify your opinions,  
17 right?

18 A Well, it depends on what you're talking about.

19 Q Now, again, I notice it says, "The state normally wants  
20 1 part per million for land application." And if we go back  
21 to, I suppose it might be Exhibit 54 or 56, the state says,  
22 in -- I think it's Exhibit 54. No, well, maybe it's 56 or 55.

23 But is it your understanding that in 1989 did the state  
24 say, "We would like you to reduce cyanide concentrations to  
25 1 milligram per liter"?

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1 A You know, I have a pretty good memory, but it would be  
2 helpful if you brought that document up.

3 Q Okay. Oh, I think this is it. This is Exhibit 56, and  
4 this is CFAC acknowledging that Montana wanted the cyanide  
5 reduced to 1 milligram per liter, right?

6 A That's their discharge limit. That's correct.

7 Q Okay. And, but, nevertheless, Montana approved a  
8 leachate disposal that had a concentration of 3 milligrams per  
9 liter.

10 A So essentially they were starting with water that had  
11 80 to 100 milligrams per liter. They ran one sample that  
12 detected 3 milligrams per liter. Is that a robust data set to  
13 assure that all of that water had that number? I would opine  
14 that it doesn't.

15 Q But Montana was --

16 A They had a, they had a 1-milligram-per-liter discharge  
17 limit. They were 3 times the discharge limit. They  
18 negotiated a one-time discharge with the State of Montana.  
19 So, yes, the State of Montana approved that discharge.  
20 However, does that mean that that was not an additive source  
21 to groundwater? No, it does not.

22 Q Do you think attenuation in the sludge had anything to do  
23 with Montana's approval?

24 A I think the communica- -- I don't know. I'm not Montana.

25 Q Okay. And, again, if -- according to Exhibit 89, Montana

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1 wanted 1 part per million but accepted 3 parts per million.  
2 And you're saying the whole problem with flux analysis, if I  
3 understood you correctly, is converting these milligrams per  
4 liters to parts per billion.

5 A No, that's not it at all. What I'm saying is a flux  
6 analysis is a mass. It's pounds. And parts per billion is a  
7 concentration. So you're comparing an apple with an orange.

8 And so what they're saying here is they're discharging a  
9 large volume of water with a concentration. You can convert  
10 that to a mass, which I believe you've done. That tells you  
11 how many pounds of cyanide you're discharging, but what it  
12 doesn't tell you is what does that mean when that material  
13 reaches groundwater?

14 Q Okay. Now as for the pot diggings, you're aware that the  
15 state approved CFAC's cleanup plan, right?

16 A I believe that the state approved the concentrations left  
17 in soil at the location of where the pot diggings were, based  
18 on a direct exposure pathway based on residential use. So if  
19 somebody were to walk by there and touch it and get it on  
20 their hands, that's, that's the number they approved.

21 Q Okay. So they approved it?

22 A That's correct.

23 Q And Montana also said no further cleanup action is  
24 needed, right?

25 A That's correct.

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1 Q And there was sampling -- I think you referred to this  
2 just now and a bit earlier. There was sampling not just of  
3 the carbon material that was excavated but also of the soil  
4 and pot diggings around it?

5 A That's correct.

6 Q Okay. And if we look at Exhibit 59, if you scroll down a  
7 bit it's easy to find. There's a visual.

8 MR. BELINSKIY: (Complied with request.)

9 BY MR. AMENT-STONE:

10 Q There we are. Here is our friend the whale again.

11 And the highest cyanide concentrations found in soil were  
12 2.1 micrograms per gram, right?

13 A So parts per million.

14 Q Is that the same thing?

15 A Yes.

16 Q Okay. And that's also the same thing as 2.1 milligrams  
17 per kilogram, right?

18 A Essentially, yes.

19 Q Okay. Now if we look at Exhibit 848 again, on Slide 91  
20 this shows, per the RI report, cyanide concentrations in soil  
21 at the surface to half a foot below surface level, right?

22 A Yes.

23 Q Okay. And we can see -- there's a legend here, and it  
24 gives concentrations in milligrams per kilogram, right?

25 A Yes.

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1 Q So 2.1 milligrams per kilogram -- which, again, that was  
2 the highest cyanide concentration found in Exhibit 59, wasn't  
3 it?

4 A Yes.

5 Q Okay. So that would be, at the high end of the orange/  
6 amber or below the -- what is that? Hot pink? Fuscia?  
7 That's right -- that would be the orange category of .1 to  
8 2.3 milligrams per kilogram?

9 A Yes.

10 Q And we see concentrations in that orange level scattered  
11 essentially all throughout the site, don't we?

12 A Yes. That's, that's a number that exceeds -- and, in  
13 fact, the yellow and the orange exceed the -- is protection of  
14 groundwater, the concentrations acceptable within soil that  
15 are protective of groundwater. That's correct.

16 Q Okay. And we see those levels throughout the site?

17 A That's correct.

18 Q Okay. And the fuscia level, which is a minimum of  
19 2.3 milligrams per kilogram, which, again, would be higher  
20 than the absolute highest that was found near the pot diggings  
21 in 1998, we see that fuscia level over by the main plant?  
22 I'll circle it for your ease.

23 And then I see to the northwest, as well, some fuscia;  
24 quite a bit, actually. And then I think there's even a red,  
25 which is the over 15 milligrams per kilogram -- in other

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1 words, a minimum of 7 1/2 times the maximum cyanide in soil  
2 found around the pot diggings -- up here (indicating) but  
3 scattered among a lot of lower readings, right?

4 A Yes.

5 Q So -- oh. And then I see there's also a red down here  
6 (indicating), right by the Flathead River, correct?

7 A Yes.

8 Q Okay. So in a number of places in the site, we see  
9 cyanide in soil at multiples of concentrations of what they  
10 found near the pot diggings.

11 A Yes.

12 Q Okay. And most of those areas that I circled, for  
13 example, to the west and -- which is northwest of the main  
14 plant and down here by the river and just north of the main  
15 plant, none of those areas have been deemed by the RI or the  
16 FS as sources of groundwater contamination, right?

17 A That's correct.

18 Q Okay. Now let's discuss SPL. So you're aware that ARCO  
19 documented -- we can take this exhibit down.

20 MR. BELINSKIY: (Complied with request.)

21 BY MR. AMENT-STONE:

22 Q You're aware that ARCO documented the total quantities of  
23 SPL that were disposed of at the west landfill, right?

24 A I believe there is documentation on that.

25 Q And that would be, for one example, Exhibit 90. You've

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1 seen this before?

2 A I have.

3 Q A 1981 memo from ARCO.

4 And there is also Exhibit 226. And if you'd go to the  
5 second page?

6 MR. BELINSKIY: (Complied with request.)

7 BY MR. AMENT-STONE:

8 Q Again, we see estimates here for tonnages in the two  
9 landfills, right?

10 A Yes.

11 Q Okay. Now I assume you're familiar with these numbers?  
12 You've read these documents before?

13 A I have. I don't have them committed to memory --

14 Q Okay.

15 A -- but I have seen them.

16 Q Okay. So the number given for SPL in the west landfill,  
17 in one of these memos it appears to be 61,800 tons, and the  
18 other one is 68,000 tons, right?

19 A I believe that's correct.

20 Q Okay. And -- we can take these down.

21 MR. BELINSKIY: (Complied with request.)

22 THE WITNESS: I believe that's carbon plus  
23 refractory, so, I mean, meaning the bricks. If that's -- if  
24 you're pointing to the 61,800? Is that what you're pointing  
25 to?

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1 BY MR. AMENT-STONE:

2 Q Yes.

3 A So that's, that's carbon plus the brick. So that would  
4 be equivalent to the 1,800 tons of pot digging. So it's, if  
5 you're comparing to just the carbon which you talked about at  
6 the pot diggings, it's 44,400.

7 Q So do you know the regulatory definition of K088?

8 A Not off the top of my head, but, yes, I do.

9 Q Okay. And you're saying it doesn't include refractory?

10 A No. What I'm saying is when you were talking about the  
11 tonnage of the pot diggings, you extracted the carbon and used  
12 that number and eliminated everything else. And as I believe  
13 the testimony yesterday would indicate that all of that  
14 material met the definition of K088.

15 Similarly, the information here, the carbon plus  
16 refractory, meaning the brick, meets the definition of K088,  
17 but only the 44,400 tons are actually carbon. So you were  
18 using carbon for your analysis from pot digging, but you're  
19 not using it for the analysis here. So, again, you're doing  
20 an apple and orange comparison.

21 Q Well, let's do, let's do it both ways. Let's do apples  
22 and oranges, and then let's do oranges and oranges if  
23 that's --

24 A It would make more sense to do oranges and oranges, it  
25 seems. I don't see the point in comparing different

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 materials, numbers. Then the math doesn't make any sense.  
2 Because if you're comparing just the carbon on the pot  
3 diggings with the K088 designated, then you're not, you're not  
4 comparing like things.

5 Q Okay. Well, if you use the full carbon-plus-refractory  
6 figure, I think you should come out with 61,800,000,000  
7 milligrams of cyanide, right?

8 A I mean, you know, we can dive into this. It's probably  
9 more than we should be trying to do here.

10 It depends on the concentrations of cyanide in the  
11 refractory. It's gonna have some, but I don't know what that  
12 concentration is. You don't know what that concentration is.  
13 We have carbon. You said 1 percent or .1 percent, which is a  
14 number you use for the pot diggings. So your math is getting  
15 muddled here. You're using numbers that don't make sense to  
16 compare.

17 Q Okay. Well, let's do it your way.

18 Unfortunately, I don't have a calculator. I do know that  
19 44.4 has got to be well over two-thirds of 61.8. So let's see  
20 here. We could actually try to do the math, or we could just  
21 say these numbers are gonna be something like --

22 MR. LAUER: (Handing.)

23 MR. AMENT-STONE: Oh, thank you, Mr. Lauer.

24 BY MR. AMENT-STONE:

25 Q So 44.4 divided by 61.8. 61.8. That comes out to

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1   71.845 percent. So if we just -- you know, everything else  
2   should be constant here. We're keeping the .1 percent  
3   concentration of cyanide. So that would give us -- so instead  
4   of -- well, that's exactly what I would have thought.

5                 Instead of getting 61,800,000,000 milligrams of cyanide,  
6   we get 44,400,000,000 milligrams of cyanide, and that makes  
7   sense because, of course, we've kept the same cyanide  
8   concentration. That's the .1 percent concentration for SPL,  
9   right?

10   A    That's an assumptive number, yes.

11   Q    An assumptive number documented in plant records?

12   A    Yes, but you don't have actual lab data for this  
13   material. So I acknowledge that you're using it in a  
14   broad-brush way.

15   Q    Fine.

16                 And let's see. Originally I found that using the  
17   61,800,000,000 number, we would get 84 years of flux from the  
18   west landfill SPL. Now if we --

19   A    All right. Again, I do not agree with the 84 years of  
20   flux. You keep coming back to this number, and as I've talked  
21   multiple times, there are so many assumptions in that number,  
22   and a potential for error, that I don't think it's a number  
23   that provides useful information.

24   Q    Okay. And now we're gonna do 71.845 percent. So instead  
25   of 30,860 days of flux, we would get 22,243 days of flux,

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1 which comes out to approximately -- I'm not doing leap years  
2 here -- about 61 years of flux. Okay. Compared to the  
3 3.2 days for the cathode carbon.

4 A I don't think -- again, I, I acknowledge your volume  
5 calculations. I don't concur with your flux analysis or the  
6 time frame for that material to pass through.

7 Q Well, I have good news for you: We're done with flux  
8 analysis for now.

9 Now there was another waste in the wet scrubber sludge  
10 pond, of course, which is the wet scrubber sludge, right?

11 A That's correct.

12 Q Okay. And we've been talking about cyanide. There's no  
13 cyanide in the wet scrubber sludge, right?

14 A To the best of my knowledge, yes.

15 Q Okay. But you'd agree that 450,000 cubic yards of  
16 calcium fluoride sludge contributed some fluoride to the  
17 groundwater at the site, wouldn't you?

18 A Again, there's a data gap, but it's, it's likely.

19 Q And you've previously testified to that, right?

20 A That's correct.

21 Q Okay. Now 450,000 cubic yards is compared to, let's say,  
22 the 1,800 cubic yards of total pot diggings material,  
23 including the noncarbon, right? I have those figures right?

24 A Yes.

25 Q Does that sound like it could be a ratio of 250 to 1?

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1 Because that's what I got.

2 A You know, it's difficult to throw numbers at me and  
3 expect me to crank them through my head. It would have been  
4 helpful to have this calculation laid out. But I'll  
5 acknowledge that that math may be correct.

6 Q Okay. And, again, you, for the reasons you've said, you  
7 didn't do a quantitative comparison of the sludge with the  
8 other waste materials in the wet scrubber pond?

9 A You mean -- I'm not sure what you mean. You mean by a  
10 volume comparison? Is that what you're asking me?

11 Q Right.

12 A I did not.

13 Q Okay.

14 A I mean, I know the volume differences, but I didn't  
15 calculate what percentages, that's correct.

16 Q Now you also opined on page 14 of your report, you said,  
17 "The discharges of process wastewater to the percolation ponds  
18 are probable sources of cyanide and fluoride detected in  
19 groundwater." Do you recall that?

20 A Yes.

21 Q Okay. Now EPA has found that unlike the west landfill,  
22 the north percolation ponds are not a continuing source of  
23 groundwater contamination; isn't that right?

24 A The RI/FS determined that.

25 Q Right. And EPA approved the RI and the FS?

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 A They've accepted it, yes.

2 Q Okay. And now you note in your report 2 million gallons  
3 of wastewater disposed of by CFAC, but you say there are no  
4 similar records for ARCO operations, right?

5 A That's correct. I mean, there was no actual hard data to  
6 show what that number was. It's my understanding that it was  
7 used similarly by Atlantic Richfield.

8 Q Okay. Now although you omitted them, you had actually  
9 seen quantities of some wastewater disposed of by ARCO at the  
10 north percolation ponds, hadn't you?

11 A I don't recall that.

12 MR. AMENT-STONE: Okay. Let's pull up your original  
13 expert report -- or, rather, to be clear, your replacement  
14 Jewett report.

15 MR. BELINSKIY: (Complied with request.)

16 BY MR. AMENT-STONE:

17 Q On page 31, you have a list of documents -- oh. Hmm.

18 Can you find his list of documents relied on? I'm  
19 wondering if it's not included in this exhibit.

20 Do you recall reviewing any documents about the soaking  
21 pit operations?

22 A I do, yes.

23 Q Okay. And did you review those before your original  
24 report?

25 A Well, I think we're conflating numbers here. I believe I

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1 acknowledged that there was soaking pit water that was  
2 discharged. What I did not have records to was the process  
3 wastewater from the overall plant. There was no permit  
4 number, for example.

5 MR. BELINSKIY: (Complied with request.)

6 BY MR. AMENT-STONE:

7 Q Okay. But, nevertheless, you refer to -- huh?

8 (Discussion off the record at counsel table.)

9 BY MR. AMENT-STONE:

10 Q Oh, there it is. Yeah. So at the -- if you'd zoom in a  
11 bit? Toward the top, toward the top -- move over to the left  
12 a little bit. It's easier to see -- there is a June --

13 MR. BELINSKIY: (Complied with request.)

14 BY MR. AMENT-STONE:

15 Q Oh, yeah, the second document on this list, or the first  
16 two, actually: "Information on Soaking Pits" and Internal  
17 Correspondence on the Subject Information on Soaking Pits."

18 Right?

19 THE COURT: Better slow down. You're going to get  
20 barked at.

21 MR. AMENT-STONE: Thank you, Your Honor.

22 BY MR. AMENT-STONE:

23 Q So you reviewed records about the quantities of soaking  
24 pit water disposed of by ARCO and Anaconda, didn't you?

25 A That's correct.

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1 Q Okay. Now I understand you're distinguishing that from  
2 the process wastewater, but in this section where you talk  
3 about contamination from discharges of process wastewater, you  
4 don't mention the soaking pits and the fact that you know how  
5 much water was put into them, do you?

6 A Well, I'm not sure I knew how much water was put into it,  
7 but I believe I was communicating that the -- there was  
8 wastewater discharged to the north percolation ponds by both  
9 Atlantic Richfield and CFAC. So I'm not disputing the fact  
10 that it's only CFAC. I acknowledge that both Atlantic  
11 Richfield and CFAC discharged wastewater to those ponds.

12 Q And we know that the soaking pits, the reason they're  
13 called soaking pits is because they were used to soak SPL,  
14 right?

15 A To assist in the removal, that's correct.

16 Q And then that SPL-contaminated water went to the  
17 percolation ponds?

18 A That's correct.

19 Q Okay. And that was done between 1964 and 1977?

20 A I believe that's right.

21 Q And we can confirm that if we look at Exhibit 90, which  
22 we were just looking at for SPL.

23 MR. BELINSKIY: (Complied with request.)

24 BY MR. AMENT-STONE:

25 Q Right. The second paragraph refers to the soaking pit

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1 operations from 1964 to '77, right?

2 A That's correct.

3 Q And it also said this operation resulted in cyanides and  
4 fluorides leaching from the pot bottoms, right?

5 A Yes.

6 Q Okay. Now those soaking pit operations likely  
7 contributed cyanide and fluoride to the groundwater, didn't  
8 they?

9 A They were disposed of in the north percolation pond, so  
10 it's -- I don't have hard data, but it's likely they did, yes.

11 Q And you've seen documentation that actually in the 1980s,  
12 ARCO and CFAC and the State of Montana all believed the  
13 soaking pit operations were the likeliest cause of cyanide  
14 contamination in groundwater?

15 A Well, I don't believe they were -- used the word  
16 "likeliest," but I believe they were, they were identified as  
17 a source of contamination to groundwater.

18 Q And before TW-17 was constructed near the west landfill,  
19 the soaking pit operations were seen as sort of the leading  
20 culprit?

21 A That was the suspected source at that time.

22 Q And CFAC never used the soaking pits, did it?

23 A Not to my knowledge, but they did use it to dispose of a  
24 couple million gallons a day of process wastewater that also  
25 contained cyanide and fluoride.

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1 Q And that was not SPL soaking water?

2 A Doesn't matter. It still contained cyanide and fluoride,  
3 and cyanide is the issue under discussion. So if you  
4 discharge 2 million gallons a day with something like 9 ppm  
5 cyanide, that's, under your loading, your mass analysis, would  
6 be a significant volume of cyanide that would be a  
7 contributing source to groundwater.

8 Q But EPA doesn't think the north percolation ponds are a  
9 source of groundwater contamination.

10 A Well, we have to parse out whether there is residual  
11 contamination at the -- within the pond itself that's acting  
12 as ongoing contamination, or whether that contamination has  
13 migrated to groundwater and is now within the soil column  
14 beneath the wet -- or the soaking ponds.

15 Q So your position is that the EPA is wrong and that the  
16 north percolation ponds should be evaluated as a source of  
17 groundwater contamination?

18 A I don't believe EPA made the decision. I believe it was  
19 the RI/FS. But it's my opinion that the north and south  
20 percolation ponds, during operations of both Atlantic  
21 Richfield and CFAC, were contributing sources of contamination  
22 to groundwater.

23 Q Now you keep distinguishing the RI/FS from the EPA, but  
24 the EPA has overseen the entire RI/FS process for the past six  
25 years, right?

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1 A The EPA is a regulatory agency. They are not doing the  
2 RI, nor are they doing the FS. Roux is doing it on behalf of  
3 CFAC. So there's a number of steps that need to be done  
4 between now and actually development of a ROD before the  
5 cleanup alternative is selected.

6 So you keep saying EPA has done this. It's not EPA  
7 that's done this. It's Roux that has done it on behalf of  
8 CFAC. EPA is the, is the authorizing agency that reviews and  
9 is involved in that process, but this is not an EPA document.  
10 It's a CFAC document.

11 Q And at every step, EPA has given comments to Roux, right?

12 A That's the process.

13 Q And Roux has incorporated those comments?

14 A Well, that's the process. I mean, in my experience in  
15 conducting RI/FSs under EPA, there's always tension between  
16 EPA and the PRP. So that back and forth is a normal process  
17 to evaluate and come up to a solution that meets all the NPL  
18 requirements and provides a cost-effective methodology for the  
19 client to clean up a site.

20 Q Let's wrap up on the soaking pits because we'll get to  
21 that in a moment.

22 If we look at Exhibit 815, just to use some actual  
23 numbers and quantify this a bit, it refers to  
24 180 million gallons of soaking pit water, right?

25 A Where is the 180?

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1 Q It is at the bottom of the text, very end.

2 A Oh, there it is. I see it. Yes.

3 Q Okay. So -- and this is a document you saw before your  
4 report?

5 A Yes.

6 Q Okay. But you didn't mention this 180 million gallons in  
7 your section about the north percolation ponds?

8 A Well, I think I was really -- the point of that was to  
9 compare the process wastewater from the overall plant. So  
10 how, you know, the 1.5 or 2 million gallons a day that were  
11 being generated from the entire facility that were  
12 discharging, that was the intent of that comparative.

13 Q Now those 180 million gallons compared to the combined  
14 1,050,000 gallons maximum of leachate disposed of by CFAC, I  
15 calculated that as a ratio of 171 to 1.

16 A Okay.

17 Q Does that sound right?

18 A I will believe you. Again, doing math in my head is  
19 probably not the most effective way to do this.

20 Q I know. I'm sorry for that, Mr. Jewett.

21 Now is it your opinion that these 180 million gallons  
22 from the soaking pit water from 1964 to 1977, are they still  
23 in the groundwater?

24 A That's an interesting question. So I know Mr. Baris's  
25 opinion is that based on their calculation of groundwater

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1 flow, that that material would have left the site, would have  
2 migrated off the property. I do not concur with that opinion.

3 Q And have you done any quantitative work to arrive at a  
4 different conclusion?

5 A Well, again, there's a lack of data set in the sense that  
6 if we had soil samples from beneath the wet scrubber sludge  
7 pond, for example, or beneath the north percolation pond and  
8 we could conduct -- determine the concentrations of cyanide  
9 within the soil column, conduct a partitioning analysis or a  
10 leachate analysis, I could do that calculation. So I am  
11 basing it on my experience working on these kinds of  
12 facilities that have always shown to me that there is a  
13 residual snail trail, for lack of a better term, of  
14 contamination that is retained within that soil column as it  
15 migrates downward.

16 Q But you've done no analysis of whether the  
17 180 million gallons are still in the system or have long ago  
18 migrated to the river?

19 A There's no, there's no way to speciate that to  
20 determine -- age-date it, for example. The information I just  
21 told you about -- the soil column, the partitioning -- that  
22 data would be useful in that analysis. So I don't have the  
23 data set to be able to do that.

24 MR. AMENT-STONE: Okay. Now we can take this down.

25 MR. BELINSKIY: (Complied with request.)

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 BY MR. AMENT-STONE:

2 Q Now you repeatedly referred to data gaps, and I'm so glad  
3 you did. You submitted a November 2020 report in which you  
4 purported to rebut certain information in the then-draft  
5 feasibility study, right?

6 A That's correct.

7 Q Okay. And one of your opinions was that there were  
8 significant data gaps in the RI, right?

9 A That's correct.

10 Q And also in the FS?

11 A That's correct.

12 Q Okay. And you're familiar with the Exponent report that  
13 was submitted by ARCO's consultants to EPA late last year?

14 A I am.

15 Q Okay. And it makes similar critiques as you did of the  
16 RI and the FS, doesn't it?

17 A That's correct.

18 Q Okay. Have you seen EPA's response to the Exponent  
19 report?

20 A I have.

21 Q Okay. And have you seen Montana's?

22 A I have.

23 MR. AMENT-STONE: And for a clear record, let's pull  
24 up 844-1 and 844.

25 MR. BELINSKIY: (Complied with request.)

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 BY MR. AMENT-STONE:

2 Q So 844-1, do you recognize this as the Exponent report?

3 A I do.

4 Q And we don't have to go through all of Mr. Sloan's, the  
5 Montana regulator's, comments, but if we go to page 4, I  
6 believe, he says, "There are not significant data gaps. . . .  
7 "These are not key data gaps."

8 So Montana rejected Exponent's position, right?

9 A They did not concur with the opinion, that's correct.

10 Q Okay. Which is another way of saying they rejected it?

11 A Well, I'm not sure they rejected it. I think what they  
12 said was that they feel that there is sufficient  
13 information -- let me back up.

14 The point of an RI is to collect sufficient information  
15 to evaluate technically feasible cleanup alternatives. The  
16 point of an FS is to evaluate those cleanup alternatives and  
17 present a ranking or an evaluation of the pros and cons, for  
18 lack of a term, which was done. So at this point, it reads,  
19 to me, that the State of Montana had decided that there was  
20 sufficient information to do that.

21 MR. AMENT-STONE: Okay. So -- and let's look at 844  
22 at -- I think I only have the Bates number. This is 556253.  
23 I think it's toward the end. It might be at the very end.  
24 Try 120.

25 MR. BELINSKIY: (Complied with request.)

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 MR. AMENT-STONE: Right.

2 BY MR. AMENT-STONE:

3 Q So you recognize this? This is EPA's May 12, 2021 letter  
4 about the Exponent report?

5 A Yes.

6 Q And do you see they said that the RI was sufficient and  
7 that they were going to continue evaluating the FS, right?

8 A Yes.

9 Q And they specifically say, "Specifically, in considering  
10 Atlantic Richfield Company's technical comments on the  
11 Remedial Investigation, we have determined that there are no  
12 data gaps or deficiencies which warrant reopening the (RI),"  
13 right?

14 A Well, as I said earlier, in all my experience working  
15 with EPA projects, there's always tension with EPA. It's  
16 common to disagree with them. And so that is their opinion.  
17 I respectfully disagree with that opinion, and that's not an  
18 unusual occurrence in going through this type of process.

19 Q And the tension here is not between EPA and Roux or CFAC;  
20 it's between EPA and ARCO, right?

21 A Well, the information was used to select a very robust  
22 and very expensive cleanup alternative, and I believe that  
23 more thorough information that was addressed through these  
24 data gaps would have been able to assist in evaluating a less  
25 expensive alternative. I think they landed on the Cadillac,

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1 and I think having these data gaps met earlier would have  
2 provided sufficient information that maybe a Ford would have  
3 done the job.

4 Q Now they didn't just land on the Cadillac; there are  
5 seven remedial alternatives being carried forward for  
6 Landfills DU1 alone, right?

7 A That's correct.

8 Q So it's not just landing on the Cadillac? They're still  
9 looking at the Hyundai and the Subaru and the BMW, right?

10 A Right, but the criteria that they use to select the  
11 alternative, I think, was flawed. I think the fundamental  
12 driver on the cleanup alternative are concentrations of  
13 cyanide that exceed the cleanup levels to protect benthic  
14 environment at the point where groundwater discharges to pore  
15 water at the seep area. That's the driver.

16 And so the analysis that was done by the RI/FS assumed a  
17 rate of migration for the cyanide to reach that point. And  
18 it's my opinion that they use a number of book values in the  
19 analysis. They made some assumptions in that analysis. And  
20 had there been more thorough data collected at the source  
21 area, that migration rate could have been more accurately  
22 estimated and been able to point to a less costly cleanup  
23 alternative.

24 Q And as you've testified, EPA did not ask for or request  
25 or propose any sampling beyond what's in the RI and the FS?

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1   A   Well, you know, you hand somebody an option, "Here, do  
2   you want the Ford or the Cadillac?" they're gonna take the  
3   Cadillac. And to come back to them and say, "Oh, well, let's  
4   go get some more data because maybe a Ford is gonna work,"  
5   they're not -- why would they do that? That's not been my  
6   experience with EPA.

7           My experience with EPA, you have to provide a reasonable  
8   cleanup alternative with sufficient data to support that  
9   alternative, and it's difficult to back off a more robust  
10   option when you've provided that to the agency.

11           MR. AMENT-STONE: Let's quickly look at page 1 of  
12   Exhibit 868.

13           MR. BELINSKIY: (Complied with request.)

14   BY MR. AMENT-STONE:

15   Q   This is just the EPA approval letter of the FS that you  
16   said had significant data gaps. And EPA, here, obviously it  
17   approves the FS. And can you also read the last sentence for  
18   the record of the first paragraph?

19   A   "The EPA and DEQ appreciate Glencore, CFAC, and Roux's  
20   efforts in developing and finalizing the report, including the  
21   identification of applicable or relevant and appropriate  
22   requirements."

23   Q   Okay. Do you know, by the way, who from the CFAC side  
24   was involved in helping EPA and Montana identify ARARs?

25   A   I assume it was Steve Wright, but I don't know that for a

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1 fact.

2 Q Okay. There was testimony about it.

3 All right. Now I guess let's move on to your opinion  
4 about remedies and costs. And I just wanted to clarify a  
5 little bit from your testimony today.

6 Now your original Opinion No. 1 in your report about the  
7 west landfill was no CERCLA response action is likely  
8 necessary, right?

9 A That's correct.

10 Q Okay. And that was on page 4 of your report.

11 On page 5 you had a similar conclusion about the center  
12 landfill, right?

13 A That's correct.

14 Q And then on page 7 you said that the wet scrubber sludge  
15 pond by contrast would require a CERCLA response action, but  
16 you didn't specify what that response action would be, did  
17 you?

18 A Not at this point in my report, no.

19 Q Okay. Was there another point in your report where you  
20 described the response action at the wet scrubber sludge pond?

21 A Well, I evaluated an alternative cost and it was embedded  
22 in that, in my last opinion.

23 Q Now nothing in your report suggested that if a slurry  
24 wall was built in the Landfills DU1 area, or if the SPL from  
25 that area was excavated, nothing in your report suggested that

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1 that would be an operational expense, did it?

2 A No.

3 Q Okay. Now going back to your original opinions about the  
4 response, which, I guess, is it true that you didn't express  
5 an opinion today about the likely cost of remediation?

6 A You mean in my testimony today?

7 Q Correct.

8 A I did not.

9 Q Okay. Now in your original opinion, you said that  
10 containment/source control with natural attenuation has been  
11 shown to be effective for site conditions, didn't you?

12 A That's correct.

13 Q And in the EPA-approved feasibility study, monitored  
14 natural attenuation was screened out as a possible remedy for  
15 Landfills DU1, right?

16 MS. WURTZLER: (Standing.)

17 THE COURT: Just a second.

18 MS. WURTZLER: Beyond the scope of direct.

19 THE COURT: Sustained.

20 BY MR. AMENT-STONE:

21 Q Didn't you offer an opinion in this case that the CERCLA  
22 remediation would cost \$5,960,000?

23 MS. WURTZLER: (Standing.)

24 THE COURT: Sustained.

25 You've got to move on. That was not expressed on

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 direct. You are limited on your cross to matters brought up  
2 on direct.

3 MR. AMENT-STONE: Understood, Your Honor.

4 Understood.

5 BY MR. AMENT-STONE:

6 Q Now you testified today about operational requirements,  
7 and I just want to be clear. You didn't provide any opinion  
8 as to how operational or closure requirements would affect the  
9 nature or cost of remediation at this site, did you?

10 A I'm not sure what you're asking me. Can you clarify?

11 Q So you would agree you gave testimony that certain areas  
12 of the site involved operational requirements?

13 A That's correct.

14 Q And you did not express any opinion as to how the -- how  
15 CFAC's engagement or omission of those operational  
16 requirements, as you phrased them, would affect the nature or  
17 cost of the cleanup?

18 A Well, my opinion is that those were something that CFAC  
19 should have done in 2009 when they discontinued operations.  
20 So in that context, if they had done that, they would not be  
21 doing them now. So, yes, they would significantly affect the  
22 cost of the remediation.

23 Q Okay, but you -- in neither your reports nor your  
24 testimony have you tied those thoughts together with any sort  
25 of analysis, right?

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1 A I'm not sure what you mean by that.

2 Q You've said there are these requirements, but you've  
3 never said how exactly the remedies being considered for the  
4 site are affected by that?

5 A Well, as I said, for example, capping the industrial  
6 landfill, that's an operational cost that should have been  
7 done in 2009. Capping the industrial landfill is a part of  
8 the remediation alternatives. So, again, if they had done  
9 this work in 2009 when they should have, that would be  
10 eliminated from being conducted under the CERCLA process.

11 And I went through a long -- all the list of sites that  
12 we looked at. Each one of those that I identified as the  
13 alternatives that are being presented in the FS, those should  
14 have been done as operational costs back in 2009 and,  
15 therefore, would have been removed from the NPL process.

16 Q And when you say capping the industrial landfill is part  
17 of the remedial alternatives, you mean it's part of any single  
18 remedial alternative because there's another part of that  
19 alternative that you omitted, isn't there?

20 A What part am I omitting from the industrial landfill?

21 Q Doesn't the FS say that a remedial alternative under  
22 consideration is consolidating wastes within the industrial  
23 landfill and then capping it?

24 A Well, that's, that's a whole different discussion. There  
25 they're talking -- that's another alternative that they have,

*JEWETT CROSS-EXAMINATION BY AMENT-STONE*

1 that they may consider and EPA may consider.

2       My opinion is that if you had capped the industrial  
3 landfill as you should have at operation closure, you wouldn't  
4 be considering consolidating more material on it because it  
5 would have been closed. Right now it's an open landfill  
6 that's available to be used for other purposes; whereas, if  
7 they had done that work in 2009, it would not be available and  
8 it would -- it's my opinion that it would be unlikely  
9 considered for additional use.

10 Q      And if the landfill was capped, then it could not be used  
11 to consolidate wastes as suggested in the feasibility study?

12 A      That's correct.

13 Q      Okay. And as for Landfills DU1, as opposed to monitored  
14 natural attenuation, the remedial alternatives being explored  
15 in the FS are expected to cost somewhere -- well, the highest  
16 ranking would cost 45.6 million, right?

17           MS. WURTZLER: It's beyond the scope of direct.

18           THE COURT: Sustained.

19           MR. AMENT-STONE: Let me confer with my cocounsel.

20           THE COURT: Yes.

21           (Discussion off the record at counsel table.)

22           MR. AMENT-STONE: Mr. Jewett, that's all from us.  
23 Thank you so much.

24           THE WITNESS: Thank you.

25           THE COURT: Redirect, Ms. Wurtzler?

*JEWETT REDIRECT EXAMINATION BY WURTZLER*

1                   REDIRECT EXAMINATION

2     BY MS. WURTZLER:

3     Q     Mr. Jewett, do you have enough water up there? You've  
4     been up there for a while.

5     A     Yeah, I probably have too much water, actually.

6     Q     Okay.

7                 All right. Now one of the early questions in your cross  
8     was about the wet scrubber sludge pond. And in your report in  
9     this case, you had grouped it in with potential CERCLA  
10    response costs. Why did you do that?

11    A     The wet scrubber sludge pond?

12    Q     Yeah.

13    A     The analysis I was doing at the time of my expert report  
14    was to look at which of these units were an ongoing source of  
15    contamination, and so any one of those that were not a source  
16    I immediately eliminated. This shouldn't even be in this  
17    CERCLA process.

18                 The wet scrubber sludge pond was and is an ongoing source  
19    of contamination, and, therefore, whatever they do, the  
20    capping or the removal, is or would be considered a  
21    requirement under the CERCLA process. I looked at it somewhat  
22    differently here this morning to say, well, okay, if CERCLA  
23    had never shown up, would they have had to do something with  
24    the wet scrubber sludge pond? And my opinion is they would.

25    Q     And that would be a normal cost of operation of a smelter

*JEWETT REDIRECT EXAMINATION BY WURTZLER*

1 business when you're shutting down the business, to put a cap  
2 on the wet scrubber sludge pond, right?

3 A Of any business where there is a left-over sludge pond  
4 where there's actually sludge at the surface, closing that  
5 facility would have been a normal operational requirement.

6 Q And if it had been done, would it still be part of a  
7 CERCLA response action?

8 A I don't believe so. I think that when you have an  
9 ongoing source that's capped, like the west landfill, like the  
10 east landfill, like the center landfill, once it's capped and  
11 contained, it would have no longer have been an ongoing  
12 source, and, therefore, additional remediation wouldn't have  
13 been necessary.

14 Q Isn't the point of incurring these costs as an ordinary  
15 course of business when you shut down the operation to avoid  
16 CERCLA response costs and avoid being listed on the National  
17 Priorities List?

18 A That's the end result. I think the real reason is to  
19 protect human health and the environment. I mean, the  
20 overarching reason that you close waste storage units like  
21 this is so that someone can't walk on it, a critter can't get  
22 exposed to it, water doesn't percolate to it, cause  
23 contamination that gets greater that needs to be cleaned up,  
24 which ultimately would mean you wouldn't be listed as an NPL  
25 site.

*JEWETT REDIRECT EXAMINATION BY WURTZLER*

1           So the intention and the integrated part of closing a  
2 business is to mitigate that so there is not contamination in  
3 the future. It's kind of like my above-ground storage tank  
4 model or idea, is that you can't just leave a tank full of  
5 sludge and let it rot out and let it spill on the ground and  
6 now somebody is gonna pay -- you're gonna have to go to  
7 somebody to pay to clean it up because the agencies are making  
8 you clean it up. The purpose is to get rid of that material  
9 so that doesn't happen.

10 Q       Well, in your experience, is it an excuse to avoid  
11 closing your operational units when you close your business,  
12 that, "Well, someday in the future, we might want to put  
13 something else in that waste unit"?

14 A       No. You can, you can sometimes sort of hold off because  
15 you might reoperate; you know, "Okay, we're just gonna take a  
16 break here." But to say, "Well, we're gonna, we're gonna  
17 leave this open landfill here because someday we might throw  
18 more material on it," I've never seen that occur.

19 Q       Now in your report you had a chart listing actions that  
20 should be taken at these various waste units, and I believe  
21 for the wet scrubber sludge pond you said that the action that  
22 should have been taken for that was to put a RCRA cap on it?

23 A       That's correct.

24 Q       And what do you mean by a "RCRA cap"?

25 A       Well, there's a couple kinds of RCRA caps, a C and a D,

*JEWETT REDIRECT EXAMINATION BY WURTZLER*

1 and it's how robust they are. So if you have a hazardous  
2 waste facility, you have to put a certain kind of cap on it.  
3 And it, again, disallows migration of percolation into the  
4 underlying soil, so it's a cap that would contain the top of  
5 that sludge and preclude any migration of precipitation or  
6 exposure to the humans or wildlife.

7 Q And your recommendation was to do a RCRA D cap?

8 A Yes, that's correct.

9 Q And is the RCRA D cap what you use for hazardous waste?

10 A I think the C cap is the hazardous waste.

11 Q C cap is hazardous waste.

12 But you put the RCRA cap on because there's -- the  
13 leachate was put in there and the pot diggings were put on  
14 there and you have some cyanide?

15 A Correct, and you have surface water infiltrating, you  
16 know, precipitation infiltrating, and so you're trying to  
17 preclude that and stop water from migrating through that  
18 material.

19 Q Okay. Now Mr. Ament-Stone showed you a map of some of  
20 the site features.

21 And if we could have the map up, please, Karen? The site  
22 overview map from the slides.

23 MS. STEPHAN: (Complied with request.)

24 BY MS. WURTZLER:

25 Q All right. We have our map up here. And on your cross

*JEWETT REDIRECT EXAMINATION BY WURTZLER*

1 you were asked about cyanide in wells downgradient of the wet  
2 scrubber sludge pond in this area (indicating) over here. Do  
3 you remember that question?

4 A Correct. Yes, I do.

5 Q Now -- and there were also some wells over here.

6 Which of these wells are affected by the wet scrubber  
7 sludge pond?

8 A The wells that would be affected by the wet scrubber  
9 sludge pond really would be this one here (indicating), and  
10 there is a potential that this one here could also be  
11 affected.

12 Q Okay. And there are probably other wells in there,  
13 right? I just --

14 A Yeah. Yes.

15 Q Yeah. And this may not be an accurate representation of  
16 where any of the wells are, but they're sort of in that  
17 general area?

18 A That's correct.

19 Q Yeah. Now these wells, did Atlantic Richfield -- well,  
20 let me back up.

21 These wells have elevated concentrations of cyanide in  
22 excess of the 200-part-per-billion number you were telling us  
23 about?

24 A Yes.

25 Q Did Atlantic Richfield put any cyanide in the wet

*JEWETT REDIRECT EXAMINATION BY WURTZLER*

1 scrubber sludge pond?

2 A No.

3 Q Did CFAC put cyanide in the wet scrubber sludge pond?

4 A Yes.

5 Q So whose cyanide do you think you're seeing in the  
6 groundwater in those wells?

7 A It would be CFAC's.

8 Q All right. Now you had some discussion with  
9 Mr. Ament-Stone about a flux analysis, and I don't know if we  
10 ever really got a complete explanation from you on why a flux  
11 analysis is not particularly useful here. Can you explain  
12 that?

13 A Sure. The driver on a cleanup in groundwater is an  
14 exposure pathway to either humans or the environment, and that  
15 exposure pathway is based on a risk determination based on  
16 concentrations of 200 parts per billion for drinking water and  
17 5 parts per billion for exposure to the benthic environment.  
18 So that concentration distribution of the cyanide within the  
19 water column is what dictates the cleanup level.

20 A flux analysis is telling you how much mass or how many  
21 pounds is moving through an entire water column for the entire  
22 width of the defined plume. So that doesn't tell you anything  
23 as far as trying to determine whether there is a risk to human  
24 health or the environment. It may tell you something when  
25 evaluating a cleanup alternative. As I mentioned, if you're

*JEWETT REDIRECT EXAMINATION BY WURTZLER*

1 pulling groundwater out and you want to treat it, you can  
2 figure out how much filtering system you may need. But it  
3 doesn't tell you where the risk, the human health or the risk  
4 to the environment is. It's the parts per billion that  
5 defines that.

6 Q Is the flux analysis a useful tool to evaluate  
7 responsibility among different parties at a site?

8 A It can be if there is a way of differentiating very  
9 specifically. So if you have two very faraway sources that  
10 may come together, you could possibly use that as a basis for  
11 allocation.

12 The challenge here is that differentiating those sources  
13 that have caused the risk, because you have one plume, would  
14 be extremely difficult and fraught with potential error.

15 Q Yeah. And we just don't have sufficient data to even  
16 attempt that, do we?

17 A That's correct.

18 Q Now Mr. Stone said that -- he said multiple times during  
19 his cross that EPA concluded, EPA decided, EPA determined.  
20 But did EPA really conclude or determine anything?

21 A No, they have not.

22 Q Because the RI/FS is drafted by Roux.

23 A Correct.

24 Q And Roux is CFAC's consultant.

25 A Correct.

*JEWETT REDIRECT EXAMINATION BY WURTZLER*

1 Q In fact, Mr. Baris, who testified here at length last  
2 week as CFAC's expert, was the person who oversaw the  
3 preparation of the RI and FS reports, right?

4 A That's correct.

5 Q And these are not EPA's reports, are they?

6 A No, they're not. They're CFAC's reports.

7 Q And they're not MDEQ's reports?

8 A No, they're not.

9 Q And they don't contain EPA's opinions or conclusions?

10 A That's correct.

11 Q And they don't contain MDEQ's opinions or conclusions?

12 A That is correct.

13 Q So when he says EPA has approved or concluded, all that  
14 really means is that EPA has provided this three-line letter  
15 saying essentially, "You finished doing the FS report. You  
16 finished doing the RI report." Is that all it is?

17 A Yes, that's correct. There's, there's multiple steps  
18 from here forward before a cleanup alternative is actually  
19 selected.

20 Q And really all that's happened to this point is that Roux  
21 and CFAC have checked the regulatory box by completing these  
22 reports?

23 A That's correct.

24 Q Now let's turn our attention to the west landfill.  
25 And if you could mark that one for us, Karen?

*JEWETT REDIRECT EXAMINATION BY WURTZLER*

1 MS. STEPHAN: (Complied with request.)

2 BY MS. WURTZLER:

3 Q And it was built into the side of a hill.

4 A That's my understanding, yes.

5 Q And Mr. Ament-Stone indicated that it was built without a  
6 side liner. Does that really matter?

7 A No, because there's no evidence anywhere in the RI or  
8 even during construction of the west landfill that groundwater  
9 is migrating laterally. Groundwater -- surface water is going  
10 to migrate downward. Gravity is gonna drive it down through  
11 the permeable soil until it reaches regional groundwater.  
12 There is no reason for it to go laterally unless there's  
13 something that -- a floor that's keeping it from doing that.  
14 So there's no evidence in the RI that there is that layer  
15 that's causing the groundwater to migrate laterally. There's  
16 no evidence in the RI that says there is perched water on top  
17 of that layer. And there's no evidence during the  
18 construction of the landfill that water was seeping out of  
19 that side wall.

20 So the reason for a cap or a cover on the top is to  
21 preclude rainwater, snow, that kind of material from migrating  
22 downward or vertically through the waste. There's no, there's  
23 no need for a side liner at this point.

24 Q Okay. Now let's turn our attention back to the wet  
25 scrubber sludge pond for a minute and the pot diggings. Were

*JEWETT REDIRECT EXAMINATION BY WURTZLER*

1 you here this morning when the Das deposition was read?

2 A Yes.

3 Q And do you recall that he testified that all of the pot  
4 diggings would have contained cyanide?

5 A Yes.

6 Q And so it's not just the carbon that has cyanide; is that  
7 right?

8 A That's correct.

9 Q So the whole 1,800 cubic yards would have had cyanide  
10 concentrations?

11 A That's correct.

12 Q And all that cyanide would have been available to migrate  
13 into groundwater and the subsurface?

14 A Correct. Cyanide salts are highly soluble, so when  
15 exposed to the environment and rain and snow, they will go  
16 into solution, wash down into the underlying soil.

17 MS. WURTZLER: Could we have, Karen, Exhibit 848,  
18 Slide 91? And this may take a while to load because it's a  
19 large document.

20 MS. STEPHAN: (Complied with request.)

21 BY MS. WURTZLER:

22 Q Okay. Do you remember being shown this in the  
23 cross-examination?

24 A I do.

25 Q And what are the -- what's with the fuscia dots over

*JEWETT REDIRECT EXAMINATION BY WURTZLER*

1 (indicating) in this area? What feature is over there?

2 A I believe that is the hazardous waste storage area.

3 Q Is that also where the north perc ponds are?

4 A Yes, somewhat.

5 MS. WURTZLER: You can clear that.

6 MS. STEPHAN: (Complied with request.)

7 BY MS. WURTZLER:

8 Q And these concentrations here, what's the difference  
9 between a 0.1 and a 2.3? Is that a big range?

10 A Well, it is given the fact that we're talking 200 parts  
11 per billion for a cleanup level, so that, that is a  
12 significant difference.

13 Q And because these dots cover such a wide range, are they  
14 really very informative as to where the contamination is the  
15 most concerning for a remediation?

16 A From a groundwater standpoint, no. This is shallow soil.  
17 It's surface soil. So it's a very different viewpoint.

18 Q And for groundwater, what's the relevant concentration  
19 that you have to worry about?

20 A Two hundred parts per billion for drinking water and then  
21 500 -- 5 parts per billion down in the seep area where the  
22 groundwater daylights into surface water.

23 Q Now how many locations at the site did have soil  
24 contamination from cyanide above the 2.3?

25 A Above the what? I'm sorry.

*JEWETT REDIRECT EXAMINATION BY WURTZLER*

1 Q Above 2.3.

2 A Well, basically anything that's in, I guess, fuscia or  
3 red.

4 Q So a relatively minor number?

5 A That's correct, at the surface.

6 MS. WURTZLER: Now you can take that down.

7 MS. STEPHAN: (Complied with request.)

8 BY MS. WURTZLER:

9 Q When Mr. Ament-Stone was doing the math with his  
10 calculations, you did indicate that he had done the math  
11 correctly. But does it matter if the math is done correctly?

12 A You know, garbage in, garbage out, right? So it depends  
13 on -- the math, the adding, the subtracting, the dividing, the  
14 multiplying were correct. It's the numbers that you put into  
15 that equation that are of interest. And so it's my opinion  
16 that the input parameters to that flux analysis are flawed  
17 significantly.

18 Q And as a result, the flux analysis really isn't  
19 particularly useful or informative?

20 A Not for what it's being used for here. If there was  
21 another reason to use it -- for example, evaluating a water  
22 treatment system -- it might be of value, but it's certainly  
23 not valuable for what we're discussing today.

24 Q And even if you're trying to do a flux analysis for a  
25 water treatment system, wouldn't you need more data about what

*JEWETT REDIRECT EXAMINATION BY WURTZLER*

1 the subsurface conditions are to really figure out if you have  
2 a uniform distribution of contamination in the subsurface and  
3 how it moves through the subsurface?

4 A That's correct. So I've -- when we've done flux  
5 analysis, we will take stratified samples at different  
6 elevations within the water column. We'll do stratified  
7 sampling at lateral locations so we can determine where that  
8 contamination is within that water column. We will have more  
9 of an analysis of how quickly the water is actually moving  
10 with that contaminant in it. So there are other pieces of  
11 information that give you a more refined result.

12 Q Yeah. And we don't have that information here, do we?

13 A No, we don't.

14 Q Now back to the RI and FS process. You've worked on a  
15 number of sites where there have been remedial investigation  
16 and feasibility study reports; is that correct?

17 A Yes, that's correct.

18 Q Is the point of that process to determine who is  
19 responsible for contamination?

20 A Somewhat, in the sense that a part of the process is to  
21 identify sources. So you're looking at: Where is a source?  
22 How does it get into the groundwater or into the soil? Where  
23 is it migrating from that source? Determining who operated  
24 that source and when they operated that source, that's not as  
25 germane to an RI process, but identifying a source is part of

*JEWETT REDIRECT EXAMINATION BY WURTZLER*

1 an RI.

2 Q And the point of identifying the source is to determine  
3 if it's something that needs to have further attention?

4 A Again, the purpose of an RI is to develop enough  
5 information to be able to evaluate and select an alternative.  
6 And so identifying a source will tell that process whether  
7 there needs to be some sort of source removal, source control,  
8 if that, if that has to be part of the quiver of cleanup  
9 alternatives.

10 Q But it's not to differentiate between multiple parties as  
11 to who is at fault and who isn't?

12 A An RI, typically no.

13 Q Now at this particular site, we're at the process where  
14 the feasibility study, the final one was submitted on June 16;  
15 is that -- of this year?

16 A That's correct, yes.

17 Q And then the next day, less than 24 hours later, EPA  
18 sends a letter saying, "You've checked the boxes. The FS is  
19 okay"?

20 A That is a surprisingly short time frame between a final  
21 document and an EPA approval.

22 Q How long is the FS?

23 A It's -- I don't know. It's huge.

24 Q And typically what's your experience of how long it takes  
25 EPA to approve a feasibility study?

*JEWETT REDIRECT EXAMINATION BY WURTZLER*

1 A My experience, it's months. Six months is not unusual.

2 Q And does the fact that the EPA has issued this letter  
3 saying, "Yes, the feasibility study is satisfactory. You've  
4 checked the regulatory box," does that mean that EPA has made  
5 any selections as to what's gonna happen at this site?

6 A No, they have not.

7 Q All that the feasibility study has, they've identified  
8 what Roux indicates as its preferred alternatives; is that  
9 correct?

10 A That is correct.

11 Q So at this point, we have no idea what it is that EPA is  
12 going to require?

13 A That's correct.

14 MS. WURTZLER: Let me just have a minute to check  
15 with my colleagues.

16 THE COURT: You may.

17 (Discussion off the record at counsel table.)

18 MS. WURTZLER: Nothing further. Thank you,  
19 Mr. Jewett.

20 THE COURT: All right. You can step down.

21 Would you please call your next witness?

22 THE WITNESS: Thank you.

23 MR. COX: Yes, Your Honor. Thank you.

24 Atlantic Richfield calls David Hall.

25 (Oath administered to the witness.)

*HALL DIRECT EXAMINATION BY COX*

1           THE COURT: Have a seat right over here.

2           THE WITNESS: Thank you.

3           THE COURT: Good afternoon. For the record, would  
4 you state what your full name is, please?

5           THE WITNESS: David Andrew Hall.

6           THE COURT: And what city do you live in?

7           THE WITNESS: I live in Greenwood Village, Colorado.

8           THE COURT: What is your profession or occupation?

9           THE WITNESS: I am an accounting and financial  
10 consultant with Alvarez & Marsal.

11          THE COURT: Mr. Cox.

12          MR. COX: Thank you very much, Your Honor.

13          WHEREUPON,

14                    MR. DAVID ANDREW HALL,  
15 called for examination by counsel for defendant, after having  
16 been first duly sworn to testify the truth, the whole truth,  
17 and nothing but the truth, testified as follows:

18                    DIRECT EXAMINATION

19          BY MR. COX:

20          Q      Good afternoon.

21          A      Good afternoon.

22          Q      So you know, Mr. Hall, the Court has accepted  
23 qualifications of all experts, including you, and your CV has  
24 been admitted in evidence, but I want to take a short tour  
25 through your background.

*HALL DIRECT EXAMINATION BY COX*

1       Where did you grow up, sir?

2   A    I grew up in the Detroit area of Michigan.

3   Q    And where did you go to college?

4   A    I went to the University of Michigan for my undergraduate  
5       degree, and then for my masters in business administration  
6       degree I went to the University of Texas at Austin.

7   Q    And you attained those degrees there?

8   A    Yes, I did.

9   Q    After completing the masters programs, did you earn some  
10      particular certifications?

11   A    Yes. Over the course of the next, well, now, 33 years  
12      since I obtained my MBA, I have become a certified management  
13      accountant, a certified fraud examiner, and a certified  
14      business evaluation analysis -- analyst. Sorry.

15   Q    And have you put those credentials to work in your, in  
16      your day-to-day profession?

17   A    Yes, I have. As a forensic accountant, I often use  
18      managerial and cost accounting principles as well as financial  
19      principles of accounting covered in those certifications and  
20      continuing professional education requirements, as well as  
21      business valuation principles, and, on certain assignments,  
22      particularly investigations, the principles and techniques as  
23      a certified fraud examiner, all focused on accounting and  
24      financial and, in disputes, damage issues.

25   Q    And what's the name of your employer?

*HALL DIRECT EXAMINATION BY COX*

1 A Alvarez & Marsal. It's a national consulting firm, and  
2 I'm in the Denver office and managing director there.

3 Q How do you describe your day-to-day work? What do you  
4 do?

5 A I primarily -- my focus is primarily on servicing  
6 clients, which, over the past three decades, have included  
7 companies of varying sizes and different industries,  
8 governmental entities, some individuals, and a variety of  
9 industries, including construction, commercial damage matters,  
10 investigations in the compliance matter and government  
11 contracting, telecommunication matters, in a varying array of  
12 types of disputes, intellectual property, increased cost  
13 claims, but also investigations as to false claims to  
14 government entities alleged and different other types of  
15 investigations that companies have a specific, specific  
16 interest in and issue in investigations or a dispute.

17 Q Do you do this sort of thing from time to time, come to  
18 court and testify?

19 A Yes, I do.

20 Q Now in this case you have evaluated the relative  
21 financial benefits to CFAC and Atlantic Richfield arising out  
22 of the ownership and operation of the aluminum smelter  
23 facility, right?

24 A That's correct. That was my assignment in this matter.

25 Q Okay. Is that the sort of thing you've done before,

*HALL DIRECT EXAMINATION BY COX*

1 evaluating financial benefit and evaluating such operations  
2 like this one?

3 A Yes. In many, in many instances, I have, and also with  
4 respect to manufacturing and processing plants, I have  
5 experience in a number of states and types of product being  
6 manufactured, including phosphate for -- and pot ash for  
7 agricultural -- I'm sorry, for fertilizer in an Idaho plant, a  
8 New Mexico plant, a soda ash plant in Wyoming, improvements to  
9 a refinery in Michigan, above-ground coal operations or  
10 processing in Colorado, as well as a gold mine in New Zealand.  
11 So at various times in my career I've analyzed the profits and  
12 loss or benefit or loss of owning and operating plants like  
13 this.

14 Q Okay. I want to loop back and ask one question about  
15 this because I can't resist, and I have to go back to your  
16 college days, and the question is: While you were at the  
17 University of Michigan, did anything of particular interest  
18 ever happen to you in Pasadena, California?

19 A Yes. I was fortunate to be part of the Michigan team,  
20 football team, that won in Pasadena. Michigan often lost in  
21 Pasadena, for anyone even casually following the Michigan  
22 Wolverine football team. So, yes, that was a fortunate  
23 outcome.

24 Q All right. So back to work in this case.

25 I want to talk about the work that you did and the

*HALL DIRECT EXAMINATION BY COX*

1      opinions that you formed, and we'll go through -- and we go  
2      through there.

3            Have you prepared illustrative slides to guide and  
4      streamline your testimony today?

5    A    Yes, I have, a number of demonstratives that are  
6      excerpted from my two reports in this matter.

7    Q    All right. Do you believe that they'll be helpful to  
8      move your testimony along and explain it?

9    A    Yes, they will.

10   Q    All right. So let's start with those and start with the  
11   concept first of your assignment. You mentioned that at some  
12   point you obtained an assignment from counsel in this case.

13   Can you describe what that assignment was?

14   A    Yes. It was to calculate the net financial benefits  
15   received by the owners of the plant that's been discussed here  
16   in testimony today and in the preceding week, and that's the  
17   Columbia Falls Reduction Plant, or what I refer to in these  
18   charts and my report as the plant.

19   Q    Okay. And once -- okay. So I understand the assignment.  
20   To execute that assignment, what did you need to do?

21   A    Well, I first wanted to understand the ownership, and on  
22   the first chart here I've divided the two periods of  
23   ownership: the Atlantic Richfield ownership period 1955 to  
24   1985 and also then the CFAC ownership period from October 1985  
25   through June 2019, was the analysis period. So I've termed

*HALL DIRECT EXAMINATION BY COX*

1 that the Atlantic Richfield ownership as well as the CFAC  
2 ownership period.

3 Q Okay. You're kind of passing over a period of ARCO.

4 Have you lumped ARCO and Atlantic Richfield together?

5 A I have, as well as Anaconda who built the plant, and have  
6 combined those two, divide these two into these two time  
7 periods.

8 Q I note down at the bottom of the page that you put notes  
9 down there. This one says "Hall Report, page 5." What's that  
10 about?

11 A Just to link the information on the chart to what --  
12 where in my report this is covered.

13 Q Okay. All right.

14 All right. So let's turn to what you did, and I think  
15 that takes us to the next slide.

16 Give an overview of the work that you performed. It says  
17 that there were some 8,000 pages. That's a lot. What was it?

18 A Yes. Given the assignment and the 65 years it covered,  
19 after understanding the dispute by reading the legal  
20 documents, the complaint and other summary documents of the  
21 plant that were both in the record as well as some research on  
22 that, understanding the plant and its operations, I then  
23 obtained and reviewed over 8,000 records which are listed  
24 here. I won't read them, but certainly from the time period  
25 farthest back forward, financial statements of Atlantic

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1 Richfield and Anaconda, when available; audit reports and  
2 analytical reports during that same ownership period for the  
3 first 30 years.

4       Also, there was information in the record I reviewed  
5 related to divestiture efforts as the company, Atlantic  
6 Richfield and the companies that encompassed that time period,  
7 had as far as divesting from noncoal -- of noncoal operations  
8 acquired from Anaconda.

9       Also, in the CFAC period, financial statements for CFAC  
10 which I've reviewed, and plant production records throughout;  
11 that, for every year, I had the production records from  
12 discovery available, and that's what the last bullet point  
13 revealed, so I could understand the amount of aluminum  
14 produced annually for the entire time period.

15 Q      Are there challenges to gathering up records going back  
16 65 years?

17 A      Yes, there are, and there were some years where there was  
18 not much information, and there were other years that  
19 qualitative or written notes and reports yielded information  
20 that I was able to use to perform an analysis comprehensively,  
21 yes.

22 Q      Based on your analysis of this small mountain of  
23 information, were you are able to arrive at conclusions  
24 regarding the respective financial benefits to the two  
25 companies?

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1 A Yes. And I formed them into two categories. I first  
2 wanted to calculate and understand, and therefore understand  
3 the capital expenditures, the amount spent by both entities,  
4 Atlantic Richfield and CFAC, on the plant and improvements to  
5 the plant. And then next, it's a related concept because  
6 those are the initial expenditures or some of the largest  
7 expenditures, what the net financial benefit was to the two  
8 entities.

9 Q Why capital investment expenditure? I mean, that's the  
10 spending of money. How is that net financial benefit?

11 A Well, it's part of it and a big part of it. It's one of  
12 the largest components. I later learned electricity cost was  
13 another large component. But as with any plant or large kind  
14 of fixed, mostly fixed-cost operation, expenditures to build  
15 the plant, increase the capability or production volume, and  
16 keeping up a plant and improving it over time, those are large  
17 expenditures, so I wanted to focus on those initially and then  
18 incorporate that into my net financial benefit conclusion.

19 Q So if you take those two categories, the capital  
20 investment expenditures and then the financial benefit,  
21 summarize your conclusions.

22 A Sure, and the chart --

23 Q Obviously they show here on the chart.

24 A Yes, thank you.

25 The Atlantic Richfield, the Item 1, capital investment

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1 expenditures were \$1.1 billion in current dollars, and that's  
2 an important concept when you're going back 65 years, and  
3 \$95 million for CFAC, also in current dollars.

4 Q Okay. And then the same summary with respect to the net  
5 financial benefit.

6 A Yes. Opinion 2, my second opinion, CFAC's net financial  
7 benefit is nearly double Atlantic Richfield's, a little over  
8 1 billion; or, in an alternative I've also produced or  
9 created, or 936 million for CFAC compared to \$565 million for  
10 Atlantic Richfield.

11 Q Okay. Let's dig into those a little bit.

12 So you started, am I right, you started with capital  
13 expenditures for Atlantic Richfield?

14 A Yes. And here is a summary by year from the records I  
15 was able to glean this information from. And I mentioned  
16 earlier the current dollars, and it's here in parentheses.  
17 All of the numbers I put on these charts today that I've put  
18 in from my report are current dollars. When there are slides  
19 pulling up a contemporaneous document, that will be in  
20 then-year dollars, of course.

21 But the importance of current-year dollars, I want to  
22 emphasize, is that expenditures from 1955 to current, to 2019,  
23 a dollar in any one of those years is not the same as another  
24 dollar. So for comparability purposes, for both entities I  
25 indexed by the type of cost, whether it was aluminum,

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1 construction costs, or electrical power, or the different  
2 types of costs, a common index. So both for CFAC and Atlantic  
3 Richfield for each year from 1955 forward, I brought those  
4 dollars current to the date -- the year of my report, 2020.  
5 So that's what I mean by "current dollars."

6 Q All right. Okay. So you've answered one of the  
7 questions I had, which was: What's the story with current  
8 dollars?

9 I think that you also answered the other one, so that  
10 leaves me with one: What's the significance of the dotted  
11 line here on your chart?

12 A I wanted to make a demarcation between really different  
13 types of capital expenditures that Atlantic Richfield incurred  
14 or spent. And the first three rows above the dotted line all  
15 relate to the initial construction or the expansion of the  
16 capability or volume being able to produce, and that's a large  
17 part, probably close to \$900 million of the \$1.1 billion. And  
18 so that part above the line is really the initial construction  
19 and the expansion.

20 Below is a different type of capital expenditure and  
21 certainly more recent as far as the transaction in 1985, and  
22 that is air pollution control systems, landfill constructions,  
23 and more related to efficiencies as well as mitigating  
24 environmental issues, and that's a smaller part but still  
25 significant as it's over \$200 million of expenditures from

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1 1980 to 1985.

2 Q So within just a very short time of the sale to CFAC?

3 A Yes, that's correct.

4 Q Okay. All right. So did you do the same thing for CFAC?

5 A Yes, I did, and I've summarized it here. They have

6 \$95 million of capital expenditures. Of course, they're

7 different in that they didn't build the plant or expand the

8 volume, but general maintenance, rebuilding of pots, and the

9 replacement of critical operating, large vehicles, make up the

10 \$95 million CFAC spent.

11 Q All right. Where did you find information regarding  
12 CFAC's capital expenditures?

13 A Their documents and their financial statements that were  
14 provided in discovery in this matter.

15 Q All right. So we had a disparity of 1.1 billion to  
16 95 million. I take it that's what's shown on, on this next  
17 slide?

18 A Yes. I just graphed it. Some people like to see it  
19 visually versus just a listing, so I've done it both ways.

20 Q All right. That's a, that's a really large difference.

21 Why?

22 A The main reason I saw was that Atlantic Richfield built  
23 and expanded the plant, so it didn't surprise me to see that  
24 large difference. CFAC did not have to do that. They bought  
25 the plant or acquired it in the mid '80s. So the entity or

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1 company that builds and expands it will spend much more as  
2 well as the, again, the \$200 million of efficiency improvement  
3 and environmental-related capital expenditures.

4 Q All right. So we've already done this summary with  
5 respect to capital investment expenditures, but you have the  
6 next one highlighted in yellow, so what's next?

7 A Yes. Just to direct the attention on the second opinion,  
8 is that CFAC's net financial benefit was nearly double  
9 Atlantic Richfield's according to my analysis and my  
10 conclusion.

11 Q All right. So in a summary way, because we'll dig into  
12 it a little bit more, can you explain what those numbers, the  
13 net financial benefit numbers, are based on and how you went  
14 about arriving at those conclusions?

15 A Yes. I approached it for the same way, the same way for  
16 both entities, and that is to identify the revenues from  
17 aluminum production, both for Atlantic Richfield and then for  
18 CFAC in their tolling business model, less the expenses. And  
19 the expenses were largely fixed for both, meaning they're not  
20 as variable as some businesses, but to include the plant and  
21 the plant expensed over time and capital expenditures expensed  
22 over time.

23 And then for CFAC, unlike Atlantic Richfield, they had  
24 significant revenues and profits for electrical power sales.  
25 And then CFAC also had decommissioning costs that I captured

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1 and included that Atlantic Richfield did not have. So there  
2 were some common elements on the two ownership periods but  
3 some differences as well, and then, again, I indexed them all  
4 to current-year dollars.

5 Q All right.

6 THE COURT: Mr. Cox, we'll take the afternoon  
7 recess. We'll be in recess until 15:15.

8 (Recess taken from 15:00:28 to 15:16:39.)

9 (Open court.)

10 THE COURT: Please be seated.

11 Mr. Cox, you have to speak into the microphone.

12 MR. COX: So I've been told. I'll try to do better.

13 THE COURT: Listen to what you have been told.

14 You may proceed.

15 MR. COX: Thank you.

16 BY MR. COX:

17 Q All right. So we're returning to net financial benefit,  
18 and I think I asked you how you had gone about your work with  
19 respect to that.

20 The first thing we did, if I understand it -- are we  
21 ready to roll? Do you have this up here? So all I've got to  
22 do is hit the button?

23 MS. STEPHAN: (Nodded head affirmatively.)

24 MR. COX: Okay.

25 ///

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1 BY MR. COX:

2 Q So as that slide is coming up, you're turning to profits  
3 during Atlantic Richfield's ownership, correct? And I see  
4 that this slide is a little talkie, so why don't we -- why  
5 don't you make the points, and we'll follow up from there.

6 A Sure. The first point is the revenues less production  
7 cost, the profits from producing aluminum, which I point out  
8 includes depreciation of the plant's capitalized property,  
9 plant and equipment, which is important because it's a large  
10 portion of the expenditures by Atlantic Richfield.

11 Q Let's loop back to, let's loop back to depreciation, so  
12 why don't you move on to -- finish up that point and move on  
13 to the next one.

14 A Sure. Depreciation is an important accounting basis or  
15 method for allocating the cost of a physical asset over time  
16 or usage, and that's so you don't buy a plant or an aircraft,  
17 in another example, that's gonna be used decades and expense  
18 it all that first year. It's a way of spreading the cost of  
19 that capital expenditure to match the revenues. It's an  
20 important accounting matching principle and certainly  
21 something Atlantic Richfield did and deducted it as a cost of  
22 goods sold, and I've captured that, is the point of the  
23 depreciation.

24 Q Okay. So if I understand this right, in order to look at  
25 profits, you definitely have to take into account depreciation

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1 and its effect on profit?

2 A Yes, for manufacturing in particular, because it's such a  
3 large component with that large upfront cost for building the  
4 plant and improving the plant.

5 Q All right. What about the second point? Can you  
6 summarize No. 2?

7 A Sure. I alluded to this earlier because, going so far  
8 back, I got all of the information from the parties that was  
9 provided but there were some years where there wasn't  
10 information, which didn't surprise me in my experience as a  
11 forensic accountant, going back this far.

12 So I just want to point out in the second point that I  
13 made some estimates that I describe in my report and show in  
14 my attachments that are based on other near years' data I had  
15 and thankfully the production records I had at all points. So  
16 I did make some estimates for both time periods, and I wanted  
17 to point that out.

18 Q All right. Very good.

19 Third point.

20 A Is important because as of the point of the sale in mid  
21 '80s, 1985, Atlantic Richfield had not depreciated all of the  
22 1.1 billion current year's dollars. There was a remaining  
23 then-year 55 million, but converted to current year of  
24 \$118 million, that had not yet been depreciated and therefore  
25 expensed. And since they're selling the plant, I deducted

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1 that because it's a cost they incurred that wasn't reflected  
2 in the cost of goods sold for the time periods -- for the  
3 profits I measured. So it's important to deduct that cost  
4 separately from the calculation in Item 1.

5 Q Okay. So could that unused depreciation be used  
6 somewhere else, or is it tied to that plant?

7 A It's tied to that plant and was spent for that plant, so  
8 it needed to be deducted to properly measure Atlantic  
9 Richfield's net financial benefit.

10 Q So by taking into account the unused depreciation, did  
11 that increase or decrease net financial benefit in your  
12 calculations?

13 A It decreased the net financial benefit because it's a  
14 cost they spent and needed to account for it, and I do, on the  
15 calculation which I believe is the next chart, I show that.

16 Q Yeah, it is.

17 So describe what's being shown in the chart titled  
18 "Profits During Atlantic Richfield Ownership."

19 A Yes. And, again, all dollars are in current dollars.  
20 The aluminum production revenues for the 30 years 1955 to 1985  
21 were over \$5.2 billion in 2020 dollars; you know, at current  
22 dollars. The production costs were over \$4.5 million for  
23 aluminum production profits of \$683 million. And that  
24 calculation really relates to Point 1 on the previous chart  
25 and Point 2 because there are, in here, included some

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1 estimates on years I didn't have the data.

2       But that's the calculation for the profits for aluminum  
3 production, but it doesn't include, and I do on the next line  
4 item, costs they incurred that weren't deducted in the  
5 production costs as part of their normal depreciation.

6 Q       So the fact that the 118 million number is in parentheses  
7 means it's -- what?

8 A       A deduction. And same with the other parentheses number,  
9 the production costs. So properly accounting for those  
10 capital investments, remaining capital investments that hadn't  
11 been accounted for on the production costs, yields a net  
12 financial benefit from plant ownership for Atlantic Richfield  
13 of \$564 million.

14 Q       All right. And that's your calculation of the net  
15 financial benefit for Atlantic Richfield. I take it you did  
16 the same thing for CFAC?

17 A       Yes, I did.

18 Q       All right. Let's turn to that.

19       Let's go through the same process. Walk through the  
20 steps, the significant issues with your calculation of profits  
21 during CFAC's ownership.

22 A       Yes, and there's three items here. They're a little  
23 different than Atlantic Richfield. I described the reason for  
24 that earlier, but the first item is exactly the same. Even  
25 though CFAC did a tolling business model, they still had

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1 revenues less production costs, including depreciation, for  
2 their capitalized property, plant, and equipment. They  
3 yielded profits from their operations.

4 Q Okay. You mentioned a tolling operation and that that  
5 was different. Can you give a quick explanation of why?

6 A Yes. CFAC had a different business model than Atlantic  
7 Richfield in that Atlantic Richfield bought the alumina, the  
8 raw material, owned it, processed it, and sold it. CFAC had a  
9 different business model in that customers of theirs,  
10 primarily just a couple of them, concentrated customers, owned  
11 the alumina but paid CFAC to produce it, and so CFAC didn't  
12 have to incur marketing costs and such. The owners of the  
13 alumina, who then owned the end product and sold it, owned it,  
14 so a little bit of different business model but using the  
15 plant in much the same way, as I understand, from an  
16 accounting perspective.

17 Q All right. So Point 1 is still what they made less what  
18 it cost and then adjustment for depreciation for capital  
19 expense, right?

20 A That's right.

21 Q Okay. What about No. 2?

22 A Unlike Atlantic Richfield, CFAC earned profits from -- it  
23 benefitted from a deregulated electrical market, and so it  
24 made a large number of sales or dollar sales for selling  
25 electricity in the early 2000 period, 2001 and 2002. When the

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1 electrical prices and power prices went up so much, it made  
2 the decision to shutter the plant and sell the electrical  
3 power it had obtained over the years when it was operating,  
4 and so I captured that for CFAC as well, and that's Item 2.

5 Q All right. And we'll come back to that because I think  
6 it deserves some further examination.

7 What about the third issue?

8 A From the last decade of the time period I looked at, CFAC  
9 had some decommissioning and idling costs that were reflected  
10 in their financial statements which decreased their net  
11 financial benefit of operating the plant, so I captured those  
12 and wanted to note those as Atlantic Richfield did not have  
13 those types of costs.

14 Q And this, this note you have about the costs, including  
15 the writing off of the remaining balance, is that the same  
16 concept that is using unused depreciation or taking into  
17 account?

18 A It is. And when you're winding down a plant, there's a  
19 write-off or impairment of assets that's done from an  
20 accounting perspective, and that's reflected in the financial  
21 statements and captured in my analysis.

22 Q All right. Based on your analysis, then, you created a  
23 chart to show CFAC's profits during their ownership period,  
24 correct?

25 A Yes.

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1 Q All right. Is that what's now shown on the screen?

2 A Yes.

3 Q All right. Seems pretty explanatory, but maybe -- is  
4 that the same three items carried over here? Revenues, costs,  
5 and profits is from the first -- or from the last page?

6 A Yes, it is. And just broken out left to right, revenues  
7 less the costs -- they're in parentheses because they're a  
8 negative or deducted from the revenues -- equals the profits.  
9 And, of course, the decommissioning costs, there's no revenue  
10 associated with that, so there is nothing reflected there but  
11 the cost, and so they were captured in this analysis. And the  
12 total of the profits before addressing the acquisition in 1985  
13 is \$936 million of a benefit or profits for CFAC for its  
14 ownership.

15 Q All right. A little bit on this power sales topic, and I  
16 know we delve into it a little bit more later, so what was  
17 this electricity that was being sold? Is that what usually  
18 ran the plant?

19 A It was. The electrical power needed for this smelter was  
20 enormous, the amount. And I had read somewhere where, when  
21 the plant was running fully, it may have used something on the  
22 order of 20 percent of the entire state's electricity.

23 So to ensure a continuous and reliable supply of that  
24 electricity, because without it the plant couldn't be run,  
25 CFAC entered into a couple of contracts with electricity

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1 providers. And particularly after 1995 there was some  
2 deregulation in that market, so it obtained these supply  
3 contracts that, in the early 2000 period, allowed it to sell  
4 that electricity rather than use that electricity to operate  
5 the plant.

6 Q Okay. So the plant was shut down?

7 A It was shut down, yes.

8 Q Were you able to tell, based upon the work that you did  
9 looking through financial records, were employees out of work?

10 A From the financial records, it showed that there was  
11 layoff expense, so, yes, a significant layoff expense, maybe  
12 in the order of \$4.5 million. There was some canceled  
13 contract expense; I think maybe triple that amount,  
14 \$14 million. It's on one of my attachments in the report that  
15 summarizes all of the revenues and costs associated with  
16 selling that electrical power.

17 Q Okay. Was Glencore the owner by the time of the  
18 electrical power sales?

19 A Yes, it was.

20 Q All right. How was it that -- well, let me, let me go  
21 back to make sure we understand this. The profits off of  
22 power sales were how much?

23 THE WITNESS: If we could go to that chart? It was  
24 600 and --

25 MS. STEPHAN: (Complied with request.)

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1           THE WITNESS: There we go. Thank you.

2           \$659 million in profits and power sales, the largest  
3 component of CFAC's benefit.

4 BY MR. COX:

5 Q       Over what period of time?

6 A       Primarily 2001 to 2002, but I have a schedule that shows,  
7 you know, the years following. There was some additional  
8 sales and expenses that follow that period, but by far the  
9 largest bulk was a 13-month period in early 2001 to 2002 when  
10 they earned those revenues and profits.

11 Q       How was it that CFAC was in a position to make some  
12 \$1.8 million a day during this time period?

13 A       They had those electrical supply contracts that it had  
14 entered into while it was producing aluminum. So from the  
15 basis of operating and producing aluminum, it had the  
16 electrical supply contracts that would allow it to make this  
17 amount of money in power sales.

18 Q       All right. So let's continue forward. We now have the  
19 two categories, capital expenditures and net financial  
20 benefit. Let's loop back to the 1985 sale of the assets by  
21 Atlantic Richfield to CFAC.

22           Do CFAC documents explain the significance of what CFAC  
23 was getting in that transaction?

24 A       Yes, it does. There are documents that reflect the value  
25 of the assets that it acquired and used in the 1985

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1 transaction.

2 Q All right. I put Chart No. 12 up in front of you. Is  
3 that -- explain what you're trying to show there, would you,  
4 please?

5 A Sure. There are some excerpts here from CFAC's documents  
6 that reflect that, on the assets it acquired in 1985, and just  
7 some bullet points which I follow up with the source records  
8 that I can summarize.

9 Q Okay. I know we talk about them a bit later, so -- and,  
10 in fact, on the next four slides do we take these exact four  
11 points and, and address each one?

12 A Yes.

13 Q All right.

14 A And it also relates to the expenditures I discussed  
15 earlier below the dotted line of that summary of Atlantic  
16 Richfield's capital expenditures over time. These bullet  
17 points relate directly to those dollars spent.

18 Q Okay. I think it's probably best to, to do them right  
19 now. Can you talk about each of these bullet points and then  
20 we'll perhaps expand on them a bit?

21 A Yes. In the early '80s, Atlantic Richfield invested  
22 heavily in new technology from a company that helped it with  
23 operating cost efficiencies. That's really the first one.

24 Q I think it's been mentioned here: Sumitomo technology?

25 A That's right.

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1 Q Okay.

2 A And CFAC recognized that after the fact and noted it, and  
3 that's what that first bullet point is.

4 Also, the second point is the unit cost attributable,  
5 efficiencies in reduction of costs, CFAC recognizes was a  
6 benefit it received from the expenditures by Atlantic  
7 Richfield in the early '80s. And, in fact, CFAC estimates, in  
8 its own records, that it was \$90 million of -- you know,  
9 approximately \$90 million in the six years ending in 1985.

10 So there certainly was a contemporaneous understanding of  
11 the benefit of Atlantic Richfield's expenditures, which were  
12 cost reduction, improved environmental emissions, and an  
13 amount. And, finally, of import, the fact that what they  
14 received was greater than the book value of those assets,  
15 which I certainly agree with, and they reflected that  
16 contemporaneously.

17 Q And that's your last point, and it looks like it's a  
18 quote. "PP&E" -- is what?

19 A Property, plant, and equipment.

20 Q All right. And it says -- "is worth significantly more  
21 than book value." What's book value?

22 A Book value is the amount in any one year of the property,  
23 plant, and equipment after that year's -- or previous year's  
24 depreciation is deducted from the total expenditure amount.  
25 So it's kind of a running score, if you will, of the total

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1 dollars of capital expenditures less each year's depreciation,  
2 is the book value for property, plant, and equipment.

3 Q Why doesn't book value equal what the property is  
4 actually worth?

5 A It may or may not. It just depends. It's usually the  
6 case that if an entity or company is able to use those assets  
7 to make sales and generate profits, that it is worth more than  
8 the book value because the book value's, you know, an  
9 accounting metric or measure that allows for the annual  
10 expenditure -- expensing of the capital expenditure, so you're  
11 matching the revenues with expenses over time.

12 Q Okay. I noted the third bullet point is a quote and said  
13 that Atlantic Richfield had capital expenditures of  
14 approximately \$90 million in the six years before 1985. Since  
15 that's a quote, is that then-dollars?

16 A Yes, it is, then-year dollars, which, if you convert it  
17 to current-year dollars is just over \$200 million I had in my  
18 chart that had the dotted line demarking when the capital  
19 expenditures were and what type they were.

20 Q So we'll take those points and tick through them a bit.

21 The first one is recent technology and operating  
22 improvements. Are you excerpting out of here CFAC documents?

23 A Yes.

24 Q And noting down at the bottom of your slide it reads  
25 "Exhibit 34, page 17," that's where this quote is drawn from?

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1 A That's correct.

2 Q All right. So is what's meant here that -- or, well,  
3 let's ask it a different way.

4 Where there are improvements in equipment like those  
5 referred to here, does that -- did that result in reduced  
6 operating costs and therefore increased profitability?

7 A Yes, it did --

8 Q Okay.

9 A -- for CFAC, and it's recognizing it here.

10 Q Okay. So that increase in efficiency of equipment was  
11 present in the plant when the keys were handed over to Brack  
12 Duker in 1985?

13 A Yes. That's being reflected here in this quote.

14 Q Let's take the next one. This is along the same lines,  
15 is it not?

16 A Yes, it is, and it's under the "Operating Performance"  
17 section of this CFAC document that reflects what the  
18 improvement in unit costs are attributable to, and that's the  
19 capital projects completed by Atlantic Richfield just prior to  
20 selling the plant in 1985.

21 Q Okay. I'm struck by the phrase: "A significant portion  
22 of the improvement in unit costs is attributable to those just  
23 presale projects."

24 A Yes, and that's precisely why most capital expenditures  
25 are undertaken. They're done for a reason: to improve

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1 efficiencies or address environmental emissions for many  
2 manufacturing plants, so, yes.

3 Q Same issue, then: CFAC's recognition that they  
4 benefitted from, from all of this investment meant that the  
5 benefit to CFAC was immediate when they took over?

6 A Yes.

7 Q And this is our third point. We had the major capital  
8 projects, and now we have the timing of those projects in  
9 connection with the sale. And here they're quantifying how  
10 much it was?

11 A That's correct. CFAC is recognizing that approximately  
12 \$90 million were spent by Atlantic Richfield in the '80s prior  
13 to the transaction.

14 Q Now we'll return to this point of PP&E being more  
15 valuable, having greater value than book value.

16 Is that -- you've drawn that out of a footnote here, that  
17 PP&E is worth significantly more than book value. Explain  
18 first how you know that -- how you know what CFAC showed as  
19 book value in various years.

20 A It's on their balance statement every year as it was with  
21 Atlantic Richfield entities that owned it prior. It's a  
22 balance sheet item -- property, plant, and equipment -- in the  
23 asset part of a balance sheet. And it's often net, and that  
24 means depreciation is taken each year, reducing the book value  
25 of the property, plant, and equipment.

*HALL DIRECT EXAMINATION BY COX*

1 Q In doing your calculations of net financial benefit, did  
2 you use book values?

3 A I did, because it reflected, for Atlantic Richfield time  
4 period, what had not yet been deducted in the production  
5 costs. So when you're looking at -- I'm looking at  
6 holistically what the net financial benefit was, I needed to  
7 have, in deductions, both their total capital expenditures and  
8 their other operating cost. And if the total capital  
9 expenditures showed a net book value that had not yet been  
10 deducted in production costs, I used that book value to deduct  
11 those expenditures because otherwise it would not have been an  
12 accurate analysis for Atlantic Richfield.

13 Q Okay.

14 A And I also used the book value on the CFAC side --

15 Q Right.

16 A -- as far as the 1985 transaction.

17 The transaction was for a dollar, I'm aware of that, but  
18 the benefit CFAC received was significant, and they realized  
19 it. And absent a valuation of those assets, I thought the  
20 book value was reasonable to use; one, because they recognized  
21 that the plant -- property, plant and equipment was more  
22 valuable than book value, but it is a number on the record  
23 that they then -- that they had acquired and then immediately  
24 used those assets to perform their tolling business, aluminum  
25 production. And, importantly, it's costs ARCO spent that they

*HALL DIRECT EXAMINATION BY COX*

1 did not have to, and it's reflected in the book value I used.

2 Q And that concept, that on the day the keys were turned  
3 over, a whole bunch of these improvements, millions of dollars  
4 worth, had already been made?

5 A That's right. The plant was theirs to use to execute  
6 their business strategy.

7 Q All right. I am curious about one more thing on this, on  
8 this particular chart. I'm gonna call your attention to it, I  
9 think, by putting a circle around it.

10 These years up here, this is from a financial statement  
11 that's not showing; 1985, right?

12 A That's correct. It goes back -- I'm sorry. That's  
13 correct, it goes back to 1989.

14 Q Okay. And we show PP&E there at 3.5 million?

15 A Yes.

16 Q Did you ever see if it was something else or  
17 significantly different in 1985?

18 A Yes. Well, they did not, since they bought the assets  
19 for a dollar, I did not see, in the financial statements right  
20 at that time, what they, what they reflected. And given the  
21 amount they spent, they started reflecting their own lower  
22 amount of property, plant, and equipment expenditures over  
23 time. And then Glencore, after its transaction, also  
24 reflected its property, plant, and equipment, and it reduced  
25 over time for the same reason, for depreciation.

*HALL DIRECT EXAMINATION BY COX*

1 Q So they're keeping track of depreciable assets, right?

2 A Yes --

3 Q All right.

4 A -- as they're required to under accounting regulations.

5 Q All right. I got it.

6 All right. So now, we'll get rid of that.

7 So summary here, net financial benefit summary, all  
8 amounts in current dollars. What do you come up with?

9 A On the left side, it's a repeat of an earlier chart, and  
10 that is that Atlantic Richfield's ownership beginning with the  
11 profits from plant ownership and operation. The revenues,  
12 costs, and profits figure we saw before of 683 million, less  
13 the undepreciated capital investment of \$118 million, for a  
14 total of \$564 million for Atlantic Richfield's ownership.

15 Q Okay. And the CFAC ownership column?

16 A Those numbers were also on an earlier chart. The  
17 revenues from its plant operation, which includes the sale of  
18 the electric -- electricity and power, 4.4 million in  
19 revenues, profits of nearly a billion but 936 million. But  
20 then I also include the property, plant, and equipment  
21 acquired in the 1985 transaction at book value of  
22 \$118 million, for a total of \$1,054,000,000 for CFAC  
23 ownership.

24 Q So, but the two numbers, 118,531,000, you have on both  
25 sides of this. Isn't that double counting?

*HALL DIRECT EXAMINATION BY COX*

1 A No, not at all. To accurately reflect the net financial  
2 benefit for each entity, you need to account for that amount  
3 for both. For Atlantic Richfield's ownership, it's part of  
4 the costs they spent, the \$1.1 billion of expenditures that is  
5 not included in the cost above, that \$4.5 million which has  
6 capital expenditures, electricity costs, employee costs, and  
7 all of their other costs to produce the aluminum. So if you  
8 didn't include the \$118 million there, you'd just simply be  
9 leaving off a large part of their capital expenditure, so it's  
10 needed there.

11 Q All right. And the numbers in red there, the share of  
12 net financial benefit, what's that?

13 A That is if you total the two total numbers in the boxes,  
14 564 million and 1,054,000,000 and then total those, they come  
15 up to about 1.6 billion. The numbers in red are the portion  
16 that CFAC and Atlantic Richfield's profits are of that total  
17 combined benefit.

18 Q Okay. All right. You're aware, I take it -- I know you  
19 did a supplemental report addressing it -- that CFAC has hired  
20 a man named Jeffrey Dunn who critiques one of the numbers on  
21 this chart. And we'll get to that, but what's his critique  
22 limited to?

23 A He does not take issue, in his report, with any of my  
24 numbers above the \$118 million number for CFAC's ownership and  
25 doesn't address any of those. He takes issue with that

*HALL DIRECT EXAMINATION BY COX*

1 number, the \$118 million for CFAC's ownership.

2 Q Thinks it should be a dollar?

3 A He does.

4 Q Okay. Well, let's talk about Mr. Dunn's critique. This  
5 is a slide you prepared to be able to do it. Explain -- he  
6 says you can't use any number for value of the plant conveyed  
7 to CFAC because the sale was for a dollar and that's what you  
8 have to use. Is that about right?

9 A Yes. It --

10 MR. LAUER: (Standing.)

11 THE COURT: Just a sec. There's an objection.

12 MR. LAUER: Leading.

13 MR. COX: It was.

14 THE COURT: It is. Sustained. Just ask the  
15 question.

16 MR. COX: Sure.

17 BY MR. COX:

18 Q I want to address Mr. Dunn's critique. Did you prepare a  
19 slide so that you could talk through Mr. Dunn's critique?

20 A Yes.

21 Q And go ahead. I would like to have you address this  
22 disagreement and why you think Mr. Dunn is wrong.

23 A Sure. At a high level, we're ships passing in the night  
24 in that he's focused on the equity value of the company and  
25 focuses in on the dollar transaction amount.

*HALL DIRECT EXAMINATION BY COX*

1        My assignment was the net financial benefit of owning and  
2 operating the plant, which is focused on asset value. And  
3 assets plus liabilities equals equity, or owner's equity, and  
4 I'm very much focused on the asset.

5        So in that regard, he does not focus on the benefit that  
6 CFAC received from those assets or cite any of the CFAC's  
7 records that recognize they understand they got a benefit by  
8 receiving those upgraded assets for Sumitomo and the other  
9 efficiencies and just really focuses in on they couldn't sell  
10 the plant, they finally sold it for a dollar, and there's no  
11 evidence of any value other than that dollar. That would be  
12 how I sum up my disagreement with Mr. Dunn in that he didn't  
13 address the same assignment I did and focused in on equity  
14 value, and I was focused on the asset value and costs that  
15 CFAC did not have to incur because they acquired assets from  
16 Atlantic Richfield.

17 Q       All right. So if you don't focus on the equity, you  
18 focus on the value of the asset -- I mean, clearly there was a  
19 plant, right?

20            MR. LAUER: (Standing.)

21            THE COURT: Just a second.

22            MR. LAUER: This is undisclosed. If you look at his  
23 supplemental report, he just took the number and did a  
24 supplemental report.

25            THE COURT: Overruled. I've got the supplemental

*HALL DIRECT EXAMINATION BY COX*

1 report up.

2 BY MR. COX:

3 Q So -- and I didn't ask it very well, anyway.

4 But the plant clearly existed, and it had just had all  
5 this money spent on it. Is that what you focused on?

6 A Yes.

7 Q All right. So I call your attention, then, to the last  
8 bullet point where it says you prepared an alternative  
9 scenario. What have you done?

10 A Yes. Although I disagree with Mr. Dunn, just for a  
11 sensitivity analysis purpose to show the impact of my overall  
12 analysis, I prepared a scenario that showed just a dollar --  
13 and because I'm rounding to thousands, it would be zero -- for  
14 the benefit received by CFAC. Even though I don't agree with  
15 that, I wanted to show in my supplemental report what that did  
16 to my 65 percent/35 percent proportional benefit from my  
17 conclusion.

18 Q All right. Let's take a look at that. What does it do?

19 A It changes the overall percent from 65 percent for CFAC  
20 to 62 percent and increases Atlantic Richfield's share of the  
21 net financial benefit from 35 percent to 38 percent.

22 And that's done by, if you notice up three lines, the  
23 PP&E, property, plant, and equipment, acquired in the '85  
24 transaction on CFAC's ownership, instead of reflecting the  
25 book value of the assets they received and used right away and

*HALL DIRECT EXAMINATION BY COX*

1 didn't have to spend money on, I put zero there to reflect  
2 Mr. Dunn's opinion. And so the total profit for CFAC is  
3 \$118 million lower, or the total net financial benefit, and  
4 I've reflected that in this scenario.

5 Q All right. To be clear, do you reject the idea that the  
6 financial benefit of the plant at transfer in 1985 was just  
7 one dollar?

8 A I do.

9 Q Yeah. That \$118 million that you used, where does it  
10 come from?

11 A That's the book value of the property, plant, and  
12 equipment that existed at that time when they purchased the  
13 plant. So it's a reflection of the \$1.1 billion that Atlantic  
14 Richfield spent over, over time, reduced for depreciation over  
15 time. So it was the remaining book value of the assets that  
16 CFAC received and began operating on and earning money  
17 immediately versus having to spend that much itself, or even  
18 more, if it didn't receive the assets of the plant.

19 Q And what did CFAC's own documents say about the value  
20 versus book value?

21 A That the value of the plant -- property, plant, and  
22 equipment was worth more than the book value.

23 Q They used the word "substantially" more?

24 A I think so, yes.

25 Q All right.

*HALL DIRECT EXAMINATION BY COX*

1 A But I used just the book value for my analysis.

2 Q All right. One more item, then, to visit before we wrap  
3 up, and that is a bit more on the power sales. I'm willing to  
4 predict you'll be asked some questions about this.

5 First, is there any doubt that CFAC made profits from the  
6 sale of electricity arbitrage in the early 2000s?

7 A No doubt at all. They did.

8 Q And you know that how?

9 A From their financial records that reflect that fact.

10 Q And the documents here make some reference to Enron Power  
11 Marketing. Was that the Enron era?

12 A It was, yes, deregulated electricity and, yes, there was  
13 a change in prices a lot that created opportunities for  
14 certain entities.

15 Q So what did Enron have to do with what CFAC was doing?

16 A My recollection and understanding, it was a participant  
17 in that electrical power. And I know from the documents, and  
18 here is one of them, that the company expanded its electrical  
19 suppliers from just Bonneville Power Administration to have  
20 contracts with Enron and as well as PacifiCorp and Flathead.  
21 So it expanded its supply of electricity contracts after  
22 1985 -- and "it" I mean CFAC -- to be able to ensure  
23 continuous and reliable electricity to run its plant.

24 Q Okay. Second question about this that I think you'll be  
25 asked about.

*HALL DIRECT EXAMINATION BY COX*

1            You told us earlier that the plant got shut down --

2    A    Yes.

3    Q    -- while they were making money on electricity sales,  
4 right?

5    A    Yes.

6    Q    Surely you're not suggesting that shutting down the plant  
7 increased the putting of hazardous substances into the soil  
8 and water.

9    A    No, and I've not addressed that issue in my report, or my  
10 assignment was the net financial benefit so I have not  
11 provided an opinion on what's -- what has -- from an  
12 environmental, into-the-soil issue at all, so, no.

13    Q    Environmental issue is not your issue?

14    A    It is not.

15    Q    Okay. How was it that CFAC was able to be in a position  
16 to benefit from these power sales, to just go out and make  
17 what amounted to be a pretty massive amount of money in a  
18 little over a year?

19    A    It started with its acquisition of the plant and  
20 operating it and, from there, obtaining electrical supply  
21 contracts that allowed it to operate put it in a position  
22 where it could benefit from power sales.

23    Q    Okay. All right. So this -- you talk about another CFAC  
24 document. I think it's listed as Exhibit 34, which is in  
25 evidence. What's your point off of this document, this slide?

*HALL DIRECT EXAMINATION BY COX*

1 A Just that CFAC recognized an opportunity, as it said, to  
2 exploit the power guarantees provided by their contracts, and  
3 it relates that -- that relates to its decision in early 2001  
4 to cease the production of aluminum; instead -- and shutter  
5 the plant and extends -- and instead, I'm sorry, sell power  
6 and do so very profitably.

7 Q Okay. You said "exploit." I noticed that CFAC's own  
8 document uses that word.

9 A Yes.

10 Q Okay. You looked -- did you look through the financial  
11 reports and records of the company in this 2001, '02, and '03  
12 time period when the electricity sales were happening and the  
13 plant was closed?

14 A Yes.

15 Q Did you find any evidence that CFAC used any of the  
16 roughly \$1.8 million a day it made in '01 or '02 to clean up  
17 or lessen the continuing development of contamination in the  
18 groundwater?

19 A No, I did not see any expenditures for that.

20 Q Okay. You were here in the courtroom when you -- when  
21 Mr. Jewett was testifying?

22 A Yes, I was.

23 Q Did you hear him talk about what was happening with  
24 groundwater movement and seeps and continuing spread of  
25 contamination during the time the plant was shut down?

*HALL DIRECT EXAMINATION BY COX*

1 A Yes.

2 Q Okay. All right. So somebody likes graphs. So this is  
3 a graph of what?

4 A Similar to the capital expenditures I showed graphically,  
5 I also show, over time of CFAC's ownership, the portion, the  
6 portion it earned from aluminum sales, which is black bars,  
7 and the profit it earned from power sales. And for most of  
8 the years, there's a positive. There are a few years there  
9 there are losses, but I simply graphed the annual results of  
10 their financial operations in this chart.

11 Q Okay. Taking into account all of the analysis of the  
12 records you've done and having considered Mr. Dunn's critique,  
13 having considered the power sales and the records of both  
14 companies, what's your final conclusion regarding net  
15 financial benefit and the shares to each?

16 A My conclusion is that CFAC had 65 percent of the overall  
17 benefit of the net financial benefits of the plant from 1955  
18 to 2020 and that Atlantic Richfield's ownership, its share was  
19 35 percent for the reasons I've indicated the numbers on this  
20 final chart.

21 MR. COX: I don't have any further questions.

22 Your Honor, I'm not entirely sure how we're going to  
23 do this, but I'm offering the slides only as illustrative or  
24 demonstrative evidence, and so I would like to mark those and  
25 move their admission as demonstrative.

*HALL CROSS-EXAMINATION BY LAUER*

1           THE COURT: Do you have any objection to that?

2           MR. LAUER: Yes. We --

3           THE COURT: All right. Sustained.

4           MR. LAUER: -- did not see all these.

5           THE COURT: Cross-examination.

6                           CROSS-EXAMINATION

7           BY MR. LAUER:

8 Q       Good afternoon, Mr. Hall.

9 A       Hello, sir. How are you?

10 Q      Good. We've never met, have we?

11 A      We have not.

12 Q      You were asked a number of questions about the property,  
13 plant, and equipment, right?

14 A      Yes.

15 Q      And you made reference to the fact that at some point in  
16 time you saw reference that the property, plant, and equipment  
17 at -- in the CFAC years was thought to be worth more than its  
18 book value, right?

19 A      Yes.

20 Q      Are you able to tell us what year you are referencing?

21 A      I'm referencing -- that specific reference was 1998, I  
22 believe, when there was a confidential information memorandum  
23 related to selling the plant to Glencore.

24 Q      And in the 1998 memorandum, do they identify what years  
25 property, plant, and equipment they are discussing when they

HALL CROSS-EXAMINATION BY LAUER

1 say the property, plant, and equipment is worth more than its  
2 book value?

3 A Yes. They show from 1989, I believe, to 1997 is my  
4 recollection, so a number-of-year period, yes.

5 Q Okay. So there's nothing in the document and nothing in  
6 your testimony and nothing in your reports that reflects their  
7 opinion on property, plant, and equipment as of the date of  
8 the sale in September of 1985, is there?

9 A No, I don't agree with that question.

10 Q Could you -- can you show me what document, then, that  
11 you are referencing --

12 A Yes.

13 Q -- that indicates the property, plant, and equipment as  
14 of September 1985?

15 A Yes. I did in my direct. There's a number of references  
16 by CFAC, including the \$90 million of capital expenditures  
17 prior to 1985. So that fact, coupled with the much smaller  
18 capital expenditures by CFAC in the several millions of  
19 dollars each year, would lead me to the conclusion that I did;  
20 that the value of the property, plant, and equipment that CFAC  
21 recognized through its statements about it at the time of the  
22 transaction is worth more than the book value.

23 MR. LAUER: Let's go to Exhibit 34.

24 MR. BELINSKIY: (Complied with request.)

25 ///

*HALL CROSS-EXAMINATION BY LAUER*

1 BY MR. LAUER:

2 Q Is this the 1998 -- or 1998 document that you mentioned  
3 in response to my question?

4 A Yes.

5 Q And are you able to find on this chart the property,  
6 plant, and equipment carrying value?

7 A Could this be pulled up so I can see the whole document;  
8 the bottom, please?

9 Q Sure.

10 MR. BELINSKIY: (Complied with request.)

11 THE WITNESS: Thank you.

12 Yes, it's four rows up from the bottom, PP&E,  
13 Note 5.

14 BY MR. LAUER:

15 Q Um-hmm. And what are the numbers as of 1989?

16 THE COURT: Make sure you use the mic, if you would,  
17 Mr. Lauer.

18 BY MR. LAUER:

19 Q What are the -- what is the book value as of 1989 of  
20 property, plant, and equipment?

21 A 3.5 million.

22 Q Okay. And the reference that the property, plant, and  
23 equipment is worth significantly more than book value is  
24 referring to the book value of 3.5 million as of year-end  
25 1989, correct?

*HALL CROSS-EXAMINATION BY LAUER*

1 A It's referring to that and all subsequent years as it  
2 grows to 11.5 million over time as CFAC made further  
3 expenditures for property, plant, and equipment, netted out  
4 with depreciation each year. So the note relates to that  
5 entire row.

6 Q So the note relates to '89, '90, '91, '92, '93, '94, '95,  
7 '96, '97, right?

8 A Yes, it does.

9 Q And it relates to increased expenditures by CFAC, right?

10 A Yes.

11 Q Okay. Now there is a difference between the value of a  
12 company's assets if liquidated, on the one hand, and the  
13 operating value of a -- and the value of an operating company,  
14 correct?

15 A Yes, going concern versus liquidation, yes.

16 Q Okay.

17 A Generally almost always there's a difference.

18 Q Correct. And on occasion, a company may have found  
19 itself in a situation where its manufacturing process is  
20 obsolete or people are able to make it much cheaper in China,  
21 for example, and, as a result, the company itself, on a  
22 going-concern basis, has very little value or no value, but  
23 its parts are worth more if liquidated, correct? And you've  
24 seen those situations, haven't you?

25 A I've seen situations that your question suggests, yes.

*HALL CROSS-EXAMINATION BY LAUER*

1 Q Right. So you can have a situation where the equipment,  
2 if sold, could be worth more than the company because the  
3 company is no longer in a position to make money?

4 A That could be the case, yes.

5 Q Okay. Now you converted all the dollars to current  
6 dollars, and I think we all appreciate that, although there  
7 may be implications that escape those of us that don't deal in  
8 this on a daily basis. But how did you convert all these past  
9 dollars to current dollars? What, what concept did you  
10 employ?

11 A Present value concept, using the application of Producer  
12 Price Index for different categories, including aluminum,  
13 electrical power, construction, construction material, and the  
14 London Metal Exchange price for aluminum when the PPI for  
15 aluminum ceased in -- late in the time period, maybe 2017, I  
16 used the LME, or London Metal Exchange. And you get an index  
17 for the current year of 1.0 and really backcast for all the  
18 other indexes back to 1955, and it gets a factor, and you  
19 apply that factor to the then-year dollars to present-value  
20 those dollars.

21 Q Let's spend a few minutes focusing on the revenue; in  
22 particular, the revenue or the profit that you estimated or  
23 was earned by Anaconda and Atlantic Richfield, okay?

24 So with respect to those revenue numbers, what did you  
25 use to convert those to current dollars? Basically inflation?

*HALL CROSS-EXAMINATION BY LAUER*

1 A No. The aluminum producer provider -- Producer Price  
2 Index, the aluminum PPI.

3 Q What does the aluminum Producer Price Index have to do  
4 with converting a dollar earned by Anaconda into current  
5 dollars?

6 A It's the mechanism most reasonable to do that exact,  
7 because it goes back to 1955 and you can see over time how  
8 that changes. They're a producer, Anaconda, and this is  
9 Producer Price Index for aluminum, the very commodity in  
10 question that they sold, so.

11 Q I know, but we're addressing the profit, the revenue.  
12 We'll get to how the revenue was, was made.

13 Are you saying that the conversion of a dollar earned by  
14 Anaconda in 1960, the conversion to current dollars would be  
15 different than, let's say, a dollar earned by Goldman Sachs in  
16 1960? You're using a different conversion rate?

17 A I would. I would want to know how Goldman Sachs made the  
18 profits in that year. In 1960, in your question, Anaconda  
19 made them by selling aluminum. So the fact that there's an  
20 aluminum PPI, Producer Price Index, is a nice match because  
21 it's the very commodity they sold that I'm trying to  
22 present-value to 1960 sale of aluminum.

23 Q Well, Anaconda's aluminum profits were consolidated with  
24 a public company, were they not?

25 A Their profits they earned at the plant were reflected in

HALL CROSS-EXAMINATION BY LAUER

1 a financial statement of a larger company, if that's what  
2 you're asking, yes.

3 Q Yes. And did you look at the rate of return of that  
4 larger company who received the profits?

5 A No, not -- that's not what you would do to present-value  
6 what Anaconda earned at this plant. It earned revenue less  
7 expenses and therefore profit, and so the relevant index is  
8 the aluminum PPI, and I applied that, which, whatever it  
9 earned would be part of that larger company's return, but  
10 that's not what you would look to to present-value it.

11 Q Well, you're assuming that Anaconda would have taken  
12 every dollar it earned and reinvested it only in the aluminum  
13 business. What gave you the right to make that assumption  
14 when you converted Anaconda's profits into current dollars?

15 A I haven't made that assumption at all, sir. I've simply  
16 calculated the net financial benefit in 2020 dollars of  
17 operating the smelter plant in question.

18 Q Which is very different than the takeaway, if you will,  
19 that the net benefit to the owners, the profits, is equal to  
20 the aluminum -- I'll rephrase that.

21 Did you consider, either in the work you did here or in  
22 other work that you've done, what a dollar invested, say, in  
23 the S&P or in the Dow Jones in 1960 would be worth today?

24 A I did not do that analysis for this case because it's not  
25 relevant to my assignment.

*HALL CROSS-EXAMINATION BY LAUER*

1 Q Well, but am I correct that if you had converted past  
2 profit using the rate of return on a typical securities  
3 portfolio, the rate of return would far exceed the  
4 inflationary rate that you used to convert 1960 profits into  
5 current dollars, right?

6 A No. I don't agree with that. I didn't use an  
7 inflationary rate. I used the Producer Price Index for  
8 aluminum, the very commodity in question here. And so, no, I  
9 don't agree.

10 Q What's the price of aluminum in 2015?

11 A I don't have that memorized. I don't know.

12 Q All right. How do they compare to the price of aluminum  
13 in 1995?

14 A I would have to look that up. I have that in attachments  
15 to my report, but I don't have it memorized.

16 Q Since China began exporting aluminum, what's happened to  
17 the LME price of aluminum?

18 A I recall that in recent years the index has gone down,  
19 and so the -- indicating to me the price has gone down, but I  
20 applied it to both entities, the same index, so what I've done  
21 is reasonable.

22 Q Would you turn to your original report, Attachment 5c?

23 Am I correct this is the source of your profits earned by  
24 Atlantic Richfield and Anaconda?

25 A It is not the source. It's a schedule summarizing the

*HALL CROSS-EXAMINATION BY LAUER*

1 work I performed which uses other sources to summarize the  
2 total revenue and profits, both before the nominal dollars --  
3 that's the then-year dollars -- and then the application of  
4 the PPI adjustment factor for aluminum, is how I would  
5 describe this chart.

6 Q Okay. Putting aside the conversion, I want to -- I want  
7 you to focus on how you decided what Anaconda earned in each  
8 of these years. Take, and take, take a year and explain to us  
9 how you decided how much Anaconda actually earned.

10 A Well, first, I didn't decide; I let the records reflect.  
11 And in years I didn't have all the information I needed, I  
12 estimated.

13 But is there a particular year, or do you want me to pick  
14 a year and walk through the schedule?

15 Q We can, we can start with, well, 1958. Tell me, tell me  
16 what's an estimate and what's based on actual data. And I'll  
17 take your word that if you tell me it's actual data, that it's  
18 actual data.

19 A Okay. We could drill down all the way to the source  
20 documents, but I appreciate that, sir.

21 1958, Column 1, every, every dollar amount in Column 1  
22 under "Actual Revenue" is from a source record.

23 Q No, but, I mean, is it a revenue record, or did you  
24 compute that using aluminum production?

25 A That, that's a revenue, actual revenue reflected in

*HALL CROSS-EXAMINATION BY LAUER*

1      Anaconda's financial statement.

2      Q      Okay.

3      A      So 1958, \$23.9 million. I won't list out all the numbers  
4      but round to \$23.9 million.

5                Moving to the right, those are nominal dollars. What  
6      those dollars are worth or what they would be in 2020 with a  
7      PPI adjustment factor in Column -- there's a note under  
8      Column 3, four columns over, PPI adjustment factor, for 1958  
9      you'd apply a factor of 3.136, meaning that volume produced  
10     and revenue earned in 1958, in 2020 dollars, you apply 3.136,  
11     yields revenue and current dollars to the right of that of  
12     74,976,000.

13              From that, the profit margin from the financial records  
14     of Anaconda in 1958 was 6.2 percent. I apply that to the  
15     \$74.9 million to calculate \$4,628,000 in current dollars.  
16     Since the revenue is in current, the profit margin is applied  
17     to that.

18      Q      Why are you applying the profit margin to your estimate  
19     of current dollars? Why aren't you taking the profit itself  
20     off of the income statement for Ana- -- for the company?

21      A      The calculation would yield the same, but the -- for, for  
22     really comparability and to put it all on one schedule here, I  
23     first apply the adjustment factor to the revenue, and then  
24     applying the profit margin to that yields the current year's.  
25     You could do it either way, but you will get to the same spot

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1 because of the multiplication.

2 Q You might not have understood my question.

3 You took the revenue number, according to your testimony,  
4 off of an accounting record that reflected, I'm assuming, the  
5 earnings, statement of earnings, for the company to 1958. Did  
6 I misunderstand you?

7 A No. And I may have misunderstood your question.

8 Q Okay. The 23,906,955, is that a line item on an income  
9 statement for the company from -- for that year? Is that a  
10 line item that you took off the income statement?

11 A Yes, I had a source record for that.

12 Q Okay. And was it the income statement?

13 A Yes.

14 Q Did you have -- didn't the income statement also show, on  
15 that same income statement, the profit?

16 A It did, and the profit margin of 6.2 percent.

17 Q Yes, but ordinarily if you're using real numbers before  
18 you convert, you would, you would not -- you would have actual  
19 revenue, actual profit, and then you would convert. What am I  
20 missing?

21 A There's some years where we have estimated revenues, as  
22 you see in Column 2, and some years we don't have the profit  
23 margin, in later years. You see the 12.5 percent beginning in  
24 1970 going forward.

25 Q We're looking at '58.

*HALL CROSS-EXAMINATION BY LAUER*

1 A I understand.

2 Q All right. So in '58, how is it that you don't have an  
3 actual profit figure if you are taking the revenue line, which  
4 I assume is before profit, off of the income statement?

5 A And I'm sorry; your question?

6 THE COURT: So in '58, how is it that you don't have  
7 an actual profit figure if you are taking the revenue line,  
8 which I assume is before profit, off of the income statement?

9 THE WITNESS: There's a profit. I could have shown,  
10 and I show in my work papers, where that profit is. It's  
11 6.2 percent times the 23.9 million. This schedule just shows  
12 it revenue, then the profit margin applied, and so it's just a  
13 presentation issue you're asking about. But there is the  
14 financial record for 1958 in then-year dollars. I used this  
15 schedule to convert all then-year dollars to current-year  
16 dollars. And I think you're asking about how I did that,  
17 and --

18 BY MR. LAUER:

19 Q You've answered the question.

20 A Okay.

21 Q You go to profit margin. What's, what's your basis for  
22 the different profit margins?

23 A The actual income statement shows the profit margin. For  
24 years it's not 12.5 percent, which I had to estimate based on  
25 the average of the years I did have the profit margins.

*HALL CROSS-EXAMINATION BY LAUER*

1 Q Does this show, does this chart show what's actual and  
2 what's estimated? In other words, you're saying in some years  
3 you have actual revenue numbers and you determined the profit  
4 by an estimated profit margin. In other words --

5 A No.

6 Q -- your profit margin in Column 4. You wouldn't need a  
7 profit margin if you had the profit. Where did you get  
8 14 percent profit margin in 1957?

9 A That's from the actual income statement. And the  
10 schedules prior to this show the parts of this schedule in my  
11 attachments, but where you see a number other than  
12 12.5 percent, that's the actual profit margin from that year  
13 from the records. For years I did not have that information,  
14 which were many for Anaconda, going back that far, I then used  
15 the average profit margin for the years I did have that data,  
16 and that was 12.5 percent.

17 Q I'll just repeat the earlier question. If, if I wanted  
18 to know, if somebody wanted to know what was the profit in a,  
19 in a particular year, typically you would answer, "I'm looking  
20 at the bottom of the income statement. The profit was this  
21 number." All right? That's typically how you would answer  
22 the question if you had the profit number in front of you,  
23 right?

24 A Yes.

25 Q You would not say, in response to a question, "What's the

*HALL CROSS-EXAMINATION BY LAUER*

1 profit?" "Well, the revenue was this, the profit margin is  
2 this, and this is the number," correct? That's not how you  
3 would answer a typical question.

4 A You could answer it that way. What, what you'll see on  
5 the income statement is the profit amount and the calculation  
6 of the profit from revenue is the profit margin, which I  
7 needed to calculate to estimate for years I didn't have that  
8 information.

9 Q Well, let's go to some of these estimated revenues,  
10 because I notice there are more estimated revenues than actual  
11 revenues.

12 How did you estimate revenue for Anaconda?

13 A For years that I did not have the financial statements  
14 that showed the revenue, I used their production volumes and  
15 applied an aluminum price based on the best information  
16 available on another attachment that calculates all of the  
17 numbers in the estimated revenue column.

18 Q What aluminum price did you use?

19 A It depended on the year. It depended on the source I  
20 had. There's an attachment we can go to, and I can show that,  
21 and then the far right said selected price based on the  
22 sources available to me, starting with the best source is, if  
23 it came from Anaconda's own records or reports, I would use  
24 that price. For years I didn't have that, I would use the  
25 London Metal Exchange price.

*HALL CROSS-EXAMINATION BY LAUER*

1 Q Okay. So when you used the London Metal Exchange price,  
2 did you use the spot price?

3 A Yes.

4 Q Okay. What else did you use to compute the actual sales  
5 revenue of aluminum sold by Anaconda?

6 A Those are the two sources. I think there's a third  
7 source. If we go to that chart, I can review it. I'm not  
8 recalling right offhand. But there's an attachment where I  
9 show the sources available to me and then what selected price  
10 that I applied to the known production for Anaconda.

11 Q Did you -- do you know that, in the sale of aluminum,  
12 aluminum is sold in the United States on the basis of the LME  
13 price plus a Midwest premium or a local premium?

14 A I am aware that there's different types of sales of  
15 aluminum. I'm not aware that there's one single way over this  
16 period of time that aluminum was sold.

17 Q All right. You know that there is a differential between  
18 the actual London Metal Exchange price and the actual spot  
19 price, the physical price for metal that's being delivered in  
20 the United States, and that, that is often referred to as  
21 either the premium, the local premium, or the Midwest premium?

22 A I've seen indications of that --

23 Q All right.

24 A -- and it's reflected in the records.

25 Q And did you determine, in each of these years where you

*HALL CROSS-EXAMINATION BY LAUER*

1 were calculating the revenue, the percentage of the  
2 all-in price for the metals sold that was not based on the LME  
3 price but rather based on the local deliverable price?

4 A My recollection is that very few years did I use the LME  
5 price because I had other sources. But we can go to the  
6 attachments that show what, what I used for -- to apply to the  
7 actual production for Anaconda in the years I didn't have  
8 their actual revenue.

9 Q What, what appendix would that be?

10 A If we could page -- it will be, yes, where I can see the  
11 attachments? If you go to 1c or 1d, is my recollection. Stop  
12 there. Schedule -- I'm sorry; Attachment 1d.

13 Q 1b? Okay.

14 MR. BELINSKIY: (Complied with request.)

15 BY MR. LAUER:

16 Q This is 1b. It starts at 199- -- all right.

17 MR. AMEN-STONE: "D" as in "delta."

18 BY MR. LAUER:

19 Q Can you show us what price you used?

20 A Yes. Because as I mentioned on direct, there's years  
21 where we don't have data --

22 Q Um-hmm.

23 A -- and I needed to estimate, and I did have the  
24 production volumes for every year. So to calculate an  
25 estimated revenue amount, I needed to apply a price to

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1       Anaconda's volumes, production volumes. And on the left to  
2 right, if you page it so we can see the title?

3                    MR. BELINSKIY: (Complied with request.)

4                    THE WITNESS: There. Thank you.

5                    And I know it's smaller so I apologize. But per  
6 company financial reports was my first place to look and, I  
7 think, the best and reasonable source to apply to the  
8 production volumes.

9                    So you can see there's a large gray area where I  
10 don't have information, despite looking through, you know,  
11 thousands of documents, on what the company's financial  
12 reports had on their price -- had for their price. On years  
13 they did have it, you can see, moving left to right, for the  
14 first year -- sorry. I'm leaning forward so I can see it --  
15 they'd have low and high price and average price and the  
16 source, the 1955 annual report. Interestingly, I had the  
17 first year, which I reflect here. I don't -- LME spot price  
18 did not happen until the '80s, so that's grayed out throughout  
19 the first several decades.

20                  And then I have other sourcing prices. There's an  
21 average producer list price that I saw from a source in  
22 Anaconda's records for each year, and that was both a  
23 potential source to use to estimate the revenue, as well as,  
24 you know, a reasonableness point.

25                  For the first year, I selected the price of 2188,

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1 which was the average price reflected in the company financial  
2 reports.

3 THE REPORTER: 2188 is \$21? What --

4 THE WITNESS: It's 21 cents, .88.

5 THE REPORTER: Thank you.

6 THE WITNESS: Thank you. Sorry. Or \$0.2188.

7 BY MR. LAUER:

8 Q Okay. Thank you.

9 You've had over 30 years of experience in accounting,  
10 right?

11 A Yes.

12 Q And I think you've testified to the difference between  
13 book value and market value, right?

14 A I have.

15 Q All right. And in your reports, you did not do a market  
16 value valuation for the facility as of September 1985,  
17 correct?

18 A I did not. It wasn't relevant to my analysis.

19 Q I just asked you if you did it or not. You didn't,  
20 right?

21 A I did not.

22 Q Now you would agree that Atlantic Richfield, as of  
23 September '85, was a large corporation?

24 A Yes.

25 Q All right. Transactions such of this sort were subject

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1 to accounting review?

2 A I'm sure transaction -- they reviewed transactions, sure.

3 Q Management review?

4 A Yes.

5 Q All right. Particularly a transaction involving an  
6 insider-related party, you would have expected this to be  
7 subject to review beyond Mr. Duker and individuals that he  
8 personally knew in the company, right?

9 A When you say "review beyond" them, what do you mean?

10 Q Somebody would have to approve a transaction in which an  
11 asset is being sold --

12 A I see.

13 Q -- to an executive or recently departed executive from  
14 the company, correct?

15 A I understand what you're asking now. Sorry.

16 Yes, it wouldn't surprise me if that was reviewed,  
17 certainly.

18 Q All right. Now in addition to the nominal one dollar  
19 sales price, there was other consideration in the transaction,  
20 correct?

21 A There was.

22 Q There was an agreement that the new company would agree  
23 to toll the alumina that ARCO was committed to and would toll  
24 it at a below-market price, 1 cent above cost. Did you see  
25 that?

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1 A I did, yes.

2 Q All right. And did you see the documents that reflected  
3 the substantial tonnages of alumina that ARCO was still  
4 obligated to purchase under its long-term alumina supply  
5 contracts?

6 A I believe I did, yes.

7 Q All right. And did you see the internal documents that  
8 reflected the potential value of -- or the potential saving,  
9 if you will, by tolling at 1 cent above cost compared to what  
10 it would have cost to toll if ARCO had to take that alumina to  
11 another smelter?

12 A I think I recall seeing an analysis to that effect, yes.

13 Q And as a result, whether it was 100,000 tons of alumina  
14 or 200,000 tons of alumina, the savings, looking into the  
15 future to ARCO by having CFAC agree to toll that alumina at a  
16 discount to market, was significant, was it not?

17 A I'd have to look at it, but I believe certainly that the  
18 cent above cost, there was an impact, and I think I saw a  
19 schedule that related to it.

20 Q All right. And it also helped ARCO out, beyond the  
21 dollars, because ARCO really was not in a position to try to  
22 take that alumina and find another smelter that would toll it  
23 for it?

24 A I don't know that to be the case, but both parties had  
25 different options. I analyzed the one they pursued, and that

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1 was my basis.

2 Q That's fair.

3 So in addition to the benefit of the discounted tolling,  
4 CFAC also agreed that it would take on certain employee  
5 obligations, and if CFAC were able to stay alive for a long  
6 enough period of time, it would eliminate certain severance  
7 obligations that ARCO would have had to incur by letting the  
8 unionized force go, right?

9 A I'm not recalling that specifically, what you're asking  
10 about.

11 Q Did you see that -- did you understand that ARCO, the  
12 Columbia Falls smelter as of 1985 under ARCO, was a unionized  
13 plant?

14 A I do recall learning that, yes.

15 Q And if ARCO had taken the only alternative that it faced  
16 to selling to Duker, which was liquidation, it would have had  
17 to close the plant and let the employees go, right?

18 A If it closed the plant, certainly the employees would be  
19 let go, and we saw that later when it was shuttered for power  
20 sales. The employees were let go.

21 Q That was in 2001?

22 A Yes.

23 Q We're talking about 1985.

24 A Sure. But my frame of reference is if you shutter the  
25 plant, yes, you won't keep the employees.

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1 Q Right. And ARCO would have had to pay severance, right?

2 A It wouldn't surprise me if they did, but I haven't seen  
3 the legal obligations written out that I can recall.

4 Q Okay. And if they would have had to pay severance by  
5 closing the plant and would not have had to pay severance if  
6 CFAC were able to keep the company going for a number of  
7 years, that was an additional benefit to ARCO, correct?

8 MR. COX: Objection, Your Honor.

9 THE COURT: Is there an objection?

10 MR. COX: Beyond the scope of direct.

11 THE COURT: Sustained.

12 BY MR. LAUER:

13 Q ARCO made the decision -- you reviewed the documents  
14 leading up to the divestiture and sale to Mr. Duker?

15 A Yes.

16 Q Okay. And that was to try to understand, as you've said,  
17 the net benefit to ARCO and the net benefit to CFAC from doing  
18 the transaction, right?

19 A No. Looking at a lot of the documents I saw, they  
20 considered alternatives. I focused in on what actually  
21 happened and calculated the net benefit of that, not of the --  
22 in the course of reviewing the records, I saw that they were  
23 considering other things. My focus is on what actually  
24 happened and what they did for the net benefit analysis.

25 Q Let's look at Exhibit 112. This leads up to the decision

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1 to sell to Mr. Duker, and -- sorry. If we go to the -- if you  
2 would go to page 2 of this document?

3 MR. BELINSKIY: (Complied with request.)

4 BY MR. LAUER:

5 Q Did you study this document or read -- did you at least  
6 read this document in connection with the work that you did?

7 A Yes.

8 Q All right. And this document describes how there was a  
9 major sales effort to try to interest prospective purchasers  
10 in buying the facility, right?

11 A I recall seeing that, yes.

12 Q All right. And originally ARCO was looking to divest  
13 40 percent of the facility and no one was interested, correct?

14 A That's my recollection, yes.

15 Q All right. And then in or about mid 1984, ARCO had made  
16 a corporate decision to exit the aluminum business. And you  
17 saw that, right?

18 A I recall learning that through my document review, yes.

19 Q And they initiated an aggressive campaign to try to find  
20 buyers, and they were not successful, right?

21 A That's my recollection, yes.

22 Q And I'd like you to take a look at Exhibit 233. This  
23 refers to Alumax. Do you see that? And you know from the  
24 work that you did that Alumax was supplying the alumina to  
25 ARCO?

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1 A I recall that, yes.

2 Q All right. And there was a point where ARCO thought  
3 Alumax might take the facility. Do you see that? And if you  
4 look at the second paragraph, Alumax was, was discussing  
5 taking the aluminum falls facility for no compensation.

6 A I see, I see that second paragraph, yes.

7 Q Yeah. If you turn to Exhibit 234, this is another  
8 document relating to the Alumax proposal. And  
9 Mr. Boultinghouse is discussing the problem ARCO has with its  
10 supply contract.

11 MR. COX: Your Honor, again, objection. Beyond the  
12 scope.

13 THE COURT: It is.

14 What's the point?

15 MR. LAUER: The point is that no one would buy this  
16 facility. It was a losing facility. It had --

17 THE COURT: Well, just ask him that: Do you think  
18 anybody would buy a losing facility?

19 BY MR. LAUER:

20 Q Do you think anybody would buy a losing facility?

21 A Yes. CFAC did because it could utilize the assets to  
22 execute its business plan.

23 Q Correct. And did you see any document, did you see any  
24 document in your review where -- let me rephrase that, and  
25 we'll do this another way.

*HALL CROSS-EXAMINATION BY LAUER*

1           Do you know -- you are familiar with the concept of  
2 impairment?

3 A       Yes.

4 Q       All right. And that's an accounting principle, right?

5 A       It is.

6 Q       And under modern day, generally accepted accounting  
7 principles, companies are required to do impairment analysis?

8 A       Yes.

9 Q       Could you describe generally what an impairment analysis  
10 is and why companies are required by generally accepted  
11 accounting principles to do an impairment analysis?

12 A       Yes. Impairment analyses are important for companies to  
13 do as part of the effort to accurately reflect the operations  
14 and their assets to the public and third parties. And it is a  
15 process which, at a high level, I'll describe as looking at  
16 the value of their assets on their books and assessing whether  
17 they're worth significantly, in some cases, or just less than  
18 that they're impaired, meaning you bought something, a piece  
19 of property, for a certain amount but for whatever reason it's  
20 not worth that amount again; that the company, through its  
21 accountants, would do an impairment analysis and assess what  
22 it's worth and reflect that in the next financial statements  
23 with a note describing that.

24 Q       And if the accountants do an impairment analysis and find  
25 that the asset is impaired, typically the asset would be

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1 written down, right?

2 A Yes, very often it would.

3 Q Right. And if you find that there's no way the value can  
4 be derived from this asset, you might write it down to zero,  
5 right?

6 A I've seen that done, yes.

7 MR. LAUER: All right. Now if you'd turn to  
8 Exhibit 236?

9 MR. BELINSKIY: (Complied with request.)

10 BY MR. LAUER:

11 Q These were ARCO's projections of its -- projecting losses  
12 of -- do you see this? -- 30 million and 24 million to -- in  
13 1985, 1986, 24 million and -- 24 million in 1986? Do you see  
14 that?

15 A 1986, I see the column 1986. Are you referring to the  
16 taxable or operating income figure, the total?

17 Q Yes, yes.

18 A 57.3 million?

19 Q No, 24.6.

20 A Oh, I see. Yes, I see that. Fifty-seven is a  
21 combination.

22 Q That's a negative number?

23 A Yes.

24 Q And 1985, negative number, 30.7?

25 A Yes.

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1 Q So, in effect, ARCO was estimating in this document, at  
2 least, that over '85 and '86, they would effectively lose an  
3 amount that actually equaled the book value of the entire  
4 company, right?

5 A The two negative numbers you're identifying add up to  
6 about that number, but it's not related to the book value of  
7 the assets. And then I note if this is, if this is a  
8 projection -- and I'd like to see the full context of this  
9 document. It looks like it, but I haven't looked at this  
10 document in a while. In 1987 through 1994 they're forecasting  
11 significant positive operating income.

12 Q Yes, but, but what they were projecting, at least for the  
13 near term, was losing more money than they were actually  
14 carrying the entire Columbia Falls smelter at?

15 MR. COX: (Standing.)

16 THE COURT: Just a second.

17 MR. COX: Objection, Your Honor. Both relevance and  
18 beyond the scope.

19 THE COURT: Well, I think we're getting quite a ways  
20 off track. I'm going to allow the questioning because it may  
21 go to the value of whatever the transaction was, but you're  
22 getting way off track, I think --

23 MR. LAUER: Okay.

24 THE COURT: -- Mr. Lauer, so focus in on what point  
25 you want to make and not beat around the bush.

*HALL CROSS-EXAMINATION BY LAUER*

1                   THE WITNESS: A forecast like this would be taken in  
2 whole.

3 BY MR. LAUER:

4 Q     Wait.

5 A     Was there a question pending?

6 Q     There's no question.

7 A     Okay.

8 Q     Now if you would take to -- do you know that leading up  
9 to the sale, the ARCO executives communicated with each other  
10 that they did not expect to get anything close to the book  
11 value of the company in a sale? Did you see that?

12 A     I don't recall specifically seeing that.

13 Q     Did you, did you do any work to evaluate -- withdrawn.

14         Let's turn to the electricity sales, right? You, you  
15 looked at documents that reflected the 1998 power contracts  
16 that CFAC entered into, correct?

17 A     Yes, CFAC documents, I did.

18 Q     Right. And those power contracts were new contracts  
19 negotiated by CFAC in or about 1998, right?

20 A     Yes, I agree.

21 Q     All right. These were not contracts that were carried  
22 over or assigned to Brack Duker's company in 1985, right?

23 A     That's correct.

24 Q     All right. And these typically are and were take-or-pay  
25 contracts, right?

*HALL CROSS-EXAMINATION BY LAUER*

1 A I've seen them referred to as that in different contexts,  
2 yes.

3 Q Right. And in order to, in order to engage in this kind  
4 of take-or-pay contract for enormous quantities of  
5 electricity, the company buying the electricity must  
6 demonstrate to the power companies that it has the financial  
7 wherewithal to make good on the take portion, whether it uses  
8 all of the power or not, right?

9 MR. COX: Objection, Your Honor. Relevance.

10 THE COURT: Sustained.

11 BY MR. LAUER:

12 Q Did you understand that in order for CFAC to enter into  
13 these contracts in 1998, they had to demonstrate their  
14 connection to Glencore and Glencore's financial wherewithal to  
15 support this contract, and this had nothing to do with  
16 Atlantic Richfield in 1985?

17 MR. COX: (Standing.)

18 THE COURT: Objection?

19 MR. COX: Relevance, Your Honor.

20 THE COURT: Overruled.

21 THE WITNESS: The first part of that question, I  
22 don't know, the Glencore, or don't recall as far as showing  
23 their -- what they showed to these electrical -- electricity  
24 providers for the contract. I don't know.

25 The second part of the question related to Atlantic

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1 Richfield; is that right?

2 BY MR. LAUER:

3 Q That getting the contract had nothing to do with the fact  
4 that Atlantic Richfield sold the company in 1985.

5 A I agree with that.

6 Q Okay.

7 A Other than that CFAC owned it, and, therefore, by owning  
8 it they needed electricity supply. So there's that  
9 connection, but I don't think you meant that.

10 Q On your, your supplemental report, right, I may have  
11 missed it but I got the sense that the only thing you did in  
12 your supplemental report was provide an alternative chart in  
13 which, instead of counting the \$118 million on both sides of  
14 the ledger, you only counted it as a reduction of Atlantic  
15 Richfield's benefit, but you no longer counted it as a benefit  
16 on CFAC's side. Right?

17 A No, I don't agree that that's all I did in the report. I  
18 did do that alternative calculation.

19 I pointed out in the report, reiterating what I put in  
20 the first report, why you absolutely need to deduct the  
21 capital expenditures via the book value remaining for Atlantic  
22 Richfield to accurately calculate their net benefits received.  
23 And I referenced, in the supplement, for the reasons I stated  
24 in my original report, that I don't agree that a dollar  
25 value -- that there was value, and CFAC referenced that, and I

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1 covered that in my direct. And so I did reference that in my  
2 supplemental report.

3 And then I did what your question asks: I did calculate  
4 an alternative not reflecting the asset-- any asset value for  
5 what CFAC purchased and then immediately used to execute its  
6 business plan.

7 Q Well, I agree with the supplemental report. I'm trying  
8 to understand your hedging.

9 If, if, as you've testified, the book value gets  
10 depreciated or gets written off if it has less value, you  
11 know, whatever the book value was as of 1985, what we see in  
12 1989, if you will -- whatever the book value of the company  
13 was in 1985, wouldn't it have been depreciated and used up, if  
14 you will, over the course of the ownership of the facility by  
15 CFAC?

16 A For CFAC's expenditures, yes. But they didn't reflect  
17 the book value of the assets it received at the acquisition  
18 that it did not have to go out and spend and, in fact,  
19 referenced and noted the value it achieved or received from  
20 the Atlantic Richfield \$90 million of expenditures in the five  
21 years prior to the acquisition.

22 Q Yes, but now you've gone from apples to oranges, to use  
23 their expression. The \$118 million, according to you, is not  
24 the book value of individual assets. It is the carrying value  
25 of the company as a whole, right?

*HALL CROSS-EXAMINATION BY LAUER*

1 A No. It is the book value of property, plant, and  
2 equipment that ARCO, that Atlantic Richfield expended, and  
3 then, through the transaction, CFAC immediately took and used  
4 to its benefit and had value because it did not have to go out  
5 and make those expenditures because it acquired it in 1985.  
6 So it's the book value of the assets and its costs. It  
7 represents costs CFAC did not have to go out and spend. It's  
8 not a, it's not a business valuation. It's not the value of  
9 the business, and nor did I set out to do that, and that's one  
10 of my disagreements with Mr. Dunn.

11 Q When you talk about revenue to CFAC and ARCO, you're  
12 talking about real dollars, right? A dollar received,  
13 correct?

14 A Yes.

15 Q When you're talking about plant and equipment, did you do  
16 a valuation, a market valuation of plant and equipment as of  
17 September 1985? The answer is no --

18 A That's correct.

19 Q -- right?

20 A There were real dollars involved in those capital  
21 expenditures.

22 Q But we don't know what they were worth in September of  
23 1985. This ledger on the CFAC side is supposed to show what  
24 the actual benefit was, not some paper value.

25 A It's not a paper value. It is a book value, but it is

*HALL CROSS-EXAMINATION BY LAUER*

1 representative and, I believe, the most reasonable, given how  
2 long ago it was, of the value CFAC received. And it indicated  
3 in its own documents it was knowledgable of that value from  
4 the property, plant, and equipment. And to represent it as  
5 zero with no value at all is unreasonable, so I believe the  
6 book value is the most reasonable number to use.

7 Q But you could have, but you didn't, do an actual fair  
8 value evaluation to show what the net benefit of that was to  
9 CFAC? Instead, you chose to use this book value which did not  
10 reflect its actual value, right?

11 A I did not do a fair value of the equity the way Mr. Dunn  
12 was focused on. I -- and I'm not sure how you would go back  
13 in time and do a fair value analysis of assets that were  
14 acquired that CFAC indicated provided it great value. So I  
15 used the book value as a reasonable proxy for the value it  
16 received, given the statements CFAC had made about the assets  
17 it acquired and the efficiencies it was able to utilize, and I  
18 think is the most reasonable approach to it.

19 Q Um-hmm. Did you give consideration, when you calculated  
20 the net benefit to ARCO, of all the savings that ARCO realized  
21 by not owning the losing facility and by not having to honor  
22 all of its losing -- all of its commitments?

23 A That analysis or any other alternatives it could have  
24 pursued was not part of my assignment or what I did. I  
25 analyzed the benefit of it owning and operating the plant, and

*HALL CROSS-EXAMINATION BY LAUER*

1 I did not do separate analysis for comparing to what it could  
2 have done in any number of respects but focused on what  
3 actually happened and what it did.

4 Q So I have one last group of questions to ask you.

5 THE COURT: Well, you're about out of time. If you  
6 can do your one last group of questions in two minutes, you  
7 can keep going.

8 MR. LAUER: Okay. I'll put it together.

9 BY MR. LAUER:

10 Q In this case -- you understand in this case that the  
11 reason you've been asked to do all this financial analysis is,  
12 in part, ARCO argues that inferences should be made from the  
13 purchase price, and those inferences should be drawn because  
14 of the nature of the sale price to Duker. Do you understand  
15 that?

16 A I agree with that question if you linked it to net  
17 benefits and not focused in on the sale price of that  
18 transaction, but I understand the context of my assignment.

19 Q Right. And, and the inference has been made that because  
20 Duker got what turned out to be a really good deal for him,  
21 that one should infer that he also agreed to take on long-term  
22 remediation costs which could be substantial. Did you  
23 understand that?

24 A Not specifically, and that wasn't part of my assignment.

25 Q But general- -- not your assignment, but do you generally

*HALL CROSS-EXAMINATION BY LAUER*

1 know that that's in part where this analysis fits in?

2 A That, I don't understand that fits directly there, but  
3 the net financial benefit I understand from reading the  
4 complaint of how that might be of consideration.

5 Q Okay. And you understood that Duker needed third-party  
6 financing and was going out to get third-party financing in  
7 order to run this business, right?

8 A I don't recall studying that.

9 Q Okay. And if, in fact, Duker had agreed to accept the  
10 long-term environmental costs associated with this facility,  
11 that would have rendered Columbia Falls insolvent right then  
12 and there, wouldn't it, and he wouldn't have been able to get  
13 financing?

14 MR. COX: Objection. Argumentative. Compound.  
15 Beyond the scope.

16 THE COURT: Overruled.

17 THE WITNESS: I don't know that to be the case. I  
18 didn't study that.

19 MR. LAUER: I have no further questions.

20 THE COURT: All right. Is there gonna be any  
21 redirect?

22 MR. COX: No.

23 THE COURT: All right. You can step down. Thank  
24 you.

25 THE WITNESS: Thank you, sir.

1                   THE COURT: So we will be in recess until 8:30  
2 tomorrow morning.

3                   But before we get in recess, a little housekeeping.

4                   Ms. Wurtzler, when Mr. Ament-Stone was doing his  
5 cross-examination, you objected the first time to exceeding  
6 the scope of direct, and I sustained it. Then the next time  
7 you stood up and I ruled without letting you state an  
8 objection. I assumed it was going to be the same one.

9                   MS. WURTZLER: Yes, Your Honor, it was the same one.

10                  THE COURT: All right. Just so the record is clear  
11 there.

12                  And then, Mr. Rauchway, where are we in terms of  
13 getting this case resolved at least as far as the proof goes?

14                  MR. RAUCHWAY: Your Honor, we just have two more  
15 witnesses, and both of them should be --

16                  THE COURT: And how long are they gonna be?

17                  MR. RAUCHWAY: I would estimate that collectively  
18 the directs for both of them will be less than three hours.

19                  THE COURT: All right.

20                  And then, Mr. Lauer, I understand you may have or do  
21 have two rebuttal witnesses?

22                  MR. LAUER: We have two witnesses, experts, who put  
23 in rebuttal reports. One will be very short, and one might  
24 take 45 minutes to an hour.

25                  THE COURT: Okay. Well, keep in mind it's rebuttal,

1 so it's not you get to put on your case in chief. So I'd like  
2 you to tell me, before you call any of those witnesses --  
3 either of those witnesses, specifically what points of  
4 rebuttal do you intend to make with the respective witness?  
5 Because I'm gonna hold you to what is rebuttal, not what is  
6 part of your case in chief.

7 Any issues you want to bring up?

8 MR. LAUER: Just on that last point, Your Honor?

9 THE COURT: Yeah. Well, go use the lectern, please.

10 MR. LAUER: Your Honor sustained a number of  
11 objections and basically directed me not to question Mr. Hall  
12 about a number of the documents preceding the 1985 sale.

13 Our expert, Mr. Dunn, has put in a report which  
14 counters that, but it's not directly counter. He, he  
15 didn't -- Mr. Hall did not do a market value. Mr. Dunn did do  
16 a market value report, basically confirming that the zero  
17 price correctly reflected market value. It was put in as a  
18 rebuttal report. They were free to depose him if they wished,  
19 and we, we do believe we have a right to put that on.

20 In the interest -- we would have put it on as part  
21 of our main case; it's just that the way, the way the chart  
22 worked, we listed -- they were rebuttal witnesses, and we said  
23 we'll put them on afterwards.

24 THE COURT: Yeah. Well, the witness, Mr. Hall,  
25 testified he didn't think that that was an appropriate way to

1 do any evaluation, and he did it, so you can rebut that.

2 MR. LAUER: Thank you.

3 THE COURT: Anything from the defendant,

4 Mr. Rauchway?

5 MR. RAUCHWAY: Nothing from our side, Your Honor.

6 THE COURT: All right. Well, we will be in recess  
7 until 8:30 tomorrow morning.

8 Thank you, Counsel.

9 (Proceedings were recessed at 17:04:59.)

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1 VOLUME 6 REPORTER'S CERTIFICATE

2 I, JoAnn Jett Corson, a Registered Diplomate  
3 Reporter and Certified Realtime Reporter, certify that the  
4 foregoing transcript is a true and correct record of the  
5 proceedings given at the time and place hereinbefore  
6 mentioned; that the proceedings were reported by me in machine  
7 shorthand and thereafter reduced to typewriting using  
8 computer-assisted transcription; that after being reduced to  
9 typewriting, a certified copy of this transcript will be filed  
10 electronically with the Court.

11 I further certify that I am not attorney for, nor  
12 employed by, nor related to any of the parties or attorneys to  
13 this action, nor financially interested in this action.

14 IN WITNESS WHEREOF, I have set my hand at Missoula,  
15 Montana this 14th day of October, 2021.

16

17 /s/ JoAnn Jett Corson

18 \_\_\_\_\_  
19 JoAnn Jett Corson  
20 United States Court Reporter  
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